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Section of Public Health, Tuberculosis and Tropical Medicine.¹

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Vice-Presidents: H. Kenneth Fry, D.S.O., B.Sc., M.D., D.P.H., F.R.A.C.P., F.R.I.P.H.H., South Australia; C. N. Atkins, E.D., M.B., Ch.B., D.P.H., Tasmania; John Dale, O.B.E., M.D., Ch.B., M.R.C.S., L.R.C.P., B.Sc. (Public Health), Victoria; C. E. A. Cook, C.B.E., M.D., Ch.M., D.P.H., D.T.M. and H., Western Australia

Honorary Secretary: A. J. King, B.Sc., M.B., B.S., Western Australia.

President's Address.

COTTER HARVEY (Sydney) in his presidential address discussed recent advances in the treatment of tuberculosis in North America. He said that the North American nations were making remarkably successful attacks on the paramount problem of the control of tuberculosis. There was widespread complacency in Australia, and the low mortality seemed to be rather by the grace of God than through any special human effort. Both the United States and Canada were far ahead of Australia in their anti-tuberculosis work. Case finding by mass survey was growing at a constantly accelerating rate. In both countries

¹ The meetings of the Section of Public Health, Tuberculosis and Tropical Medicine with the Section of Radiology and Radiotherapy, the Section of Surgery and the Section of Anaesthesia, and the Section of Pathology, Bacteriology, Biochemistry and Experimental Medicine, have already been recorded.

a large number of the people examined were found to have previously unsuspected tuberculosis. The keynotes to the success of the mass surveys were adequate organization and publicity, and adequate follow-up and diagnosis. In the latter respect Canada was better off than the United States, as most of the persons found to be infected were referred to clinics. The by-products of the surveys provided a problem; sometimes curious shadows appeared in the films, the diagnosis eluding radiologists and clinicians; in other films an endless variety of pulmonary abnormalities and mediastinal tumours and cardiac disease were revealed. Sometimes the discovery was the means of saving the unsuspecting victim's life. Discussing diagnosis, Dr. Harvey paid a tribute to the unremitting search made in the laboratory for positive bacteriological findings. The newer media of Dubos were being widely used; it was said that they would produce a characteristic growth of

virulent bacilli in ten to twelve days. That was important in streptomycin sensitivity tests. Dr. Harvey said that tomography was used everywhere, particularly for the unveiling of doubtful apical cavities. The aetiology of pulmonary calcifications as found in surveys was being carefully studied. Histoplasmosis could closely simulate tuberculosis; in that condition the calcified spots might appear anywhere in the lung field, whereas in tuberculosis they were usually found towards the apices. There was some doubt as to whether the skin tests were reliable, and there was no agreement on the significance of pulmonary calcifications. There was a steadily increasing appreciation of the importance of rehabilitation in all its aspects. The three fundamental factors in a rehabilitation programme were (i) vocational counselling, (ii) vocational training and (iii) placement direction and assistance (Cunning). All were given due appreciation. Social assistance loomed large in the modern campaign, and the most advanced welfare programme that Dr. Harvey had seen was that of British Columbia; he discussed it in considerable detail. Towards the goal of prevention America had made great progress. Jordan's work in Minnesota was remarkable. His technique consisted of five points: (i) the tuberculin test as the first line of attack; (ii) X-ray examination of all reactors; (iii) tracing of all infection to its source; (iv) thorough examination of tuberculin reactors and of those with abnormal X-ray shadows; (v) admission to hospital and isolation of all those found to be infective. The Americans admitted that they had one weak link in their tuberculosis control scheme—the isolation of the infective patient. In some States they could forcibly place a patient in an institution, but they could not keep him there. Some of the Provinces of Canada had gone the whole way, and a magistrate could now sentence a patient to a long period of detention in a sanatorium. With regard to education, Trudeau's emphasis on education and information over the years had borne fruit, and a recent Gallup poll revealed a widespread knowledge by the public of the fundamental facts concerning the disease. In conclusion, Dr. Harvey suggested that the British Medical Association might later sponsor a network of voluntary health organizations such as the local health councils of North America, to supervise or control varied aspects of public health including preventive medicine; he emphasized his belief that for the ultimate eradication of tuberculosis from Australia a full staff of whole-time medical officers was an absolute essential.

ALAN PENINGTON (Victoria) said that Dr. Harvey had covered a great deal of ground, and there was an immense amount to be seen and heard in the United States, there being two aspects of the work in that country which he desired to emphasize. The first was the problem of what was loosely called "a tuberculosis service", and he stressed that there was a great difference between such a service and a "chest service". It was the duty of the latter under either private or governmental auspices to make a diagnosis of tuberculosis, and only when that diagnosis had been made did a subject become the responsibility of the tuberculosis service. He considered that aspect most important, and doctors now were being taught to deal with "chest diseases" and not "tuberculosis", this development having led to a much better appreciation of the whole problem. The advantages of such an outlook were exemplified by the fact that the full recognition of histoplasmosis had come from the X-ray services, and he feared that trouble would arise in Australia if they had "tuberculosis specialists" rather than "chest specialists". The second point he wished to emphasize was the changing attitude in the treatment of pulmonary tuberculosis. The use of antibiotics had already led to a remarkable speeding up in the programme of treatment, and in America the greatest emphasis was now placed on surgery—not merely "cutting surgery", but the surgical approach to tuberculosis as such, with earlier operation after the use of streptomycin. In fact, the programme had been so speeded up that the demand for beds had increased; but it was regretted by the American physicians that streptomycin was being sold on the open market, as patients were now arriving in sanatoria with streptomycin-resistant organisms.

Amoebiasis.

BRUCE HALL (Sydney) read a paper on problems in the diagnosis of amoebiasis, dealing more particularly with the chronic stages of the disease. He said that diagnosis might rest not only on the clinical picture and recovery of the parasite from the stools, but also on the result of anti-amoebic treatment; the problem he was presenting was that of the patient whose history, symptoms and clinical findings might all be suggestive of the disease, but from whose stools they were unable to recover the organism. The basic difficulty in recovering the parasite from the stools was the irregularity in time and number of the discharge of cysts. Opinions varied as to the number of stools which should be examined and as to whether saline aperients aided the recovery of cysts. Improved results had been claimed from the use of concentration and flotation methods. Culture of the stool was also advocated by some. However, nobody seemed satisfied with existing methods and results and Dr. Hall felt that there was still much to learn. Three practical considerations contributed to the weakness in all methods: the selection of the material, the skill and experience of examiners and the time available for examination of each stool. Referring to other tests, Dr. Hall said that complement fixation and skin tests were not reliable, so that in chronic amoebiasis they could not be completely dependent on stool examination or serology for confirmation of diagnosis and were bound to proceed on a clinical diagnosis, hoping to achieve reasonable confirmation by satisfactory response to treatment. The latter might be complicated by slowness of response in some cases and by reluctance of the patient for various reasons to get better, so that sound clinical standards of diagnosis were essential. These Dr. Hall discussed in detail, stressing the importance in the taking of the history of gastro-intestinal disorders and their previous treatment. He presented details of physical findings in a series of cases, emphasizing the value of the recording of signs in assessing the response to test treatment. He considered that sigmoidoscopic examination should be a routine measure. Test therapy was only justified on good clinical grounds, subjective and objective, being best carried out with a combination of emetine and "Enterovioform" or of emetine and carbasone; definite or reasonably definite response might be expected in four out of five cases, provided that the treatment was adequate.

BRUCE HUNT (Perth) said that his qualifications for both agreeing and disagreeing with Dr. Hall were an intimate acquaintance with the mucosa of the lower bowel of many thousands of members of the Eighth Division, with the disease in 500 returned prisoners of war and with a personal infection lasting for three years. Amoebae had been brought to Australia, and he was now seeing amoebiasis in civilians who had never been out of the Commonwealth. He was of the opinion that the handling of such patients should be more rigorous than Dr. Hall had suggested, but agreed with him that radiological and white cell count investigations were of no value. He laid great stress on the importance of an adequate history, microscopic findings and sigmoidoscopic examination, and if the symptoms and the sigmoidoscopic findings were significant, even in the absence of the finding of amoebae in the stools on microscopic examination, then he regarded the case as being one of amoebiasis. More and more he was being forced to believe in the value of therapeutic trial in doubtful cases, especially as emetine and the arsenicals were harmless. Emetine did not damage the myocardium, and even if the administration of an arsenical was followed by untoward effects, such effects were transient. His practice was to give ten grains of emetine followed by "Carbasone" or "Stovarsol" and wait for two or three months for assessment of results—a period longer than Dr. Hall had suggested. His investigations of over 400 ex-prisoners of war from Burma, where 100% of the native population were infected, showed that they now fell into three groups—"cured", "improved" and "not relieved". He thought it would be a good thing for Australia that any person who had served in the tropics and then acquired persistent diarrhoea should be regarded as suffering from amoebic dysentery and treated accordingly.

G. PENINGTON (Melbourne) said that he agreed largely with Dr. Hunt's views, and supported the contention of Dr. Hall that there would be an increase in endemic amebic dysentery in Australia. He thought it justifiable to give a therapeutic trial in suggestive cases, whether or not amebae were found. Difficulties did arise in cases in which there was a suggestive history with added psychogenic factors; but even in those cases it was essential to eliminate amebae. He regarded sigmoidoscopic examination as important, and there was one symptom he had yet to see in a patient with dysentery who was not harbouring amebae—that was a sloppy, oedematous mucosa, usually with loss of vascular pattern and often no ulceration. In such cases, on those grounds alone he would give a course of emetine and "Carbasone".

JOHN DALE (Melbourne) asked had there been any spread from ex-servicemen to close relatives, and recalled that when he was working in Western Australia liver abscess was not uncommon in the Kalgoorlie area, especially along the wood lines where the population was largely foreign.

Bruce Hall (Sydney), in reply, agreed with Dr. Hunt that no myocardial damage followed the administration of emetine. He had been confirmed in that belief by an investigation he had carried out some years earlier, when he found that electrocardiographic examination of patients taking emetine revealed no abnormality more serious than some slight alteration in T waves unaccompanied by any clinical evidence of damage or cause for anxiety. It was his practice to treat patients and assess the results early, and if such assessment was confirmatory of the diagnosis to proceed to a full course of treatment. In any case of doubtful response he also gave a full course. However, in cases in which there was no early response he was not keen to pursue treatment, because of possible underlying psychogenic factors. Such an attitude, he agreed, might be thought by some to be over-cautious; but he thought it a wise one to adopt. In reply to Dr. Dale's inquiry, Dr. Hall said that he had found two families with more than one case of amebic dysentery, and in each family there was an ex-serviceman whose infection had spread to his civilian relatives. Liver abscess he saw only occasionally, but he was still encountering cases from the 1914-1918 war, which had remained unrecognized, or in which relapse had occurred.

Malaria.

EDWARD FORD (Sydney) discussed the malaria problem in Australia and the Pacific territories. His paper was read for him by F. E. HEYMANSON (Perth). Professor Ford referred to the advances made in malaria control as a result of investigations made necessary by the 1939-1945 war. He then gave an account of the distribution of malaria in Australia and its Pacific dependencies, with some details of the extent of the problem in the various parts of the region. Professor Ford said that on the Australian mainland basic malarial problems arose from the nearness of hyperendemic reservoirs of infection to a vast northern zone which was rendered susceptible by the presence of the efficient vector *Anopheles punctulatus moluccensis*. The area, which extended south to latitude 19° south, was subject to smouldering endemicity and occasional outbreaks. On the mainland south of that potentially malarious area, except for limited areas in Queensland, implantation of the disease was improbable. A serious danger existed of the establishment in northern Australia of new anopheline vectors from close-lying islands. Turning to Melanesia, Dr. Ford said that the basic malarial problems were three. The first was the reduction of malarial intensity in hyperendemic areas to an extent which would lower the infant and child mortality and lessen the effects of chronic infection among the native inhabitants. Such measures called for large and continuous expenditure for a cause which would show no immediate economic return, and for people who had no voice in government. Any measures which lowered the malarial intensity to any degree at all would produce beneficial results. The second problem was the protection of non-immune highland natives from malarial infection, and consequent high mortality, when removed to

malarious districts. The third problem was the protection of European settlers and the prevention in new settlements and industrial ventures of the subtertian epidemics for which Melanesia was notorious.

G. A. RANSOME (Malaya) said that in Singapore in the years from 1938 to 1942 about fifteen cases a year of cerebral malaria were seen, and with one and a half pints of saline solution given intravenously and ten grains of quinine the majority rapidly recovered. He was therefore astonished when reports came from the Assam area that cases of cerebral malaria among the troops had a death rate of 70% to 80%, and once a patient had become comatose death was almost inevitable. Investigation of that situation led to a decision to use a special team for the treatment of such patients and to the imposition of special discipline. The methods used were five in number. The first was the giving of drugs by a "colour system". That was the recording on temperature charts by the use of special colours of every drug administered, it having been found that the reason for the alleged failure of "Mepacrine" was the failure of patients to take it, so that thenceforth all drugs were taken under the direct supervision of a sister or medical officer. The second point was the intravenous administration of quinine as a routine measure, when the temperature was over 104° F., it having been found that direct injection of seven grains every four hours for forty-eight hours was preferable to administration by drip, because the necessity of giving the four-hourly dose led to a routine check at those periods by the medical officer. Over 9000 such injections had been given with no deaths attributable to the procedure. Later in the campaign "Mepacrine" tended to replace quinine, as those responsible became more satisfied with it. Thirdly, it was insisted that the orderly medical officer had to be informed by the ward medical officer in any serious case if, on the compulsory evening ward round in summer, the patient was found to be laughing, grimacing or bed-wetting; such symptoms were a precursor of coma, and led to the immediate intravenous administration of quinine. Once a patient was determined to be in a pre-comatose or comatose condition, he was removed to a special unit, and there assessed, first in reference to his circulatory state, and if he was in a collapsed condition he was given serum or saline solution. If he was not collapsed, and if his systolic blood pressure was in the region of 100 millimetres of mercury, the patient was placed in a sitting posture, it being found that in that position the liability to both pulmonary and cerebral oedema was lessened and the mortality rate reduced by 14%. As a fourth measure lumbar puncture was performed in every case as a routine, because not infrequently patients suffered from cerebrospinal meningitis and malaria concurrently. Fifthly, every patient with malignant tertian malaria and a heavy infestation of parasites had a blood count made four-hourly, and if necessary he was given a blood transfusion. Professor Ransome went on to say that among other problems encountered in the Burma campaign was a variety of malaria associated with uræmia, either from dehydration or from actual kidney damage. Four cases of subdural hæmatoma associated with malignant tertian malaria had occurred, and in cases of coma which rapidly deepened and in which pupillary changes appeared, such a complication was always suspected. The control of fluid balance had occasioned some difficulties, as few nurses were available; but the problem of rehydrating patients was solved by the use of intranasal tubes with a fluid drip.

C. E. COOK (Perth) supported Professor Ford's plea for a proper medical service in the Northern Territory and other malarious areas, with stress on preventive rather than therapeutic aspects. He said that the epidemic of 1929-1934 in northern and north-western Australia was one of malignant tertian malaria, and an extraordinary feature of that epidemic was the fact that when it reached Western Australia in 1934 it was regarded as influenza despite quite adequate warning of its approach. The severity of that epidemic could be judged from the fact that 150 natives and 15 whites died at Fitzroy Crossing. His experience in Ceylon in 1941 showed that ten to fourteen days of treatment with quinine bishydrochloride completely cured

malignant tertian malaria without relapse, but later when "Mepacrine" was used relapses occurred.

G. A. Ransome (Malaya), in reply, considered that the cause of such relapses was the failure of the troops to take "Mepacrine", because in Burma it had been found that when proper disciplinary measures were instituted there was little difference in the relapse rate of patients treated with either of the drugs.

Tuberculous Empyema.

ALAN H. PENINGTON (Melbourne) read a paper on tuberculous empyema. He said that the most satisfactory definition of the condition was suppurative pleurisy in which the tubercle bacillus was either the sole infective organism, or one of the organisms of a mixed infection. Dr. Penington emphasized that the suppurative character of the pleurisy denoted a specific pathological and clinical condition in which the prognosis was grave; serous and sero-purulent effusions should not be classed as tuberculous empyemata. The diagnosis of tuberculous empyema as distinct from simple tuberculous pleural effusion implied the presence of a pleuro-pulmonary fistula and demanded urgent treatment. Unless effective treatment was given, a large proportion of affected patients would die from the condition. Prevention of tuberculous empyema required skilled handling of an artificial pneumothorax, and implied the division of all pleural adhesions that could be divided, and the avoidance of positive intrapleural pressures during the course of an artificial pneumothorax. If adhesions were not divisible, serious consideration must be given to the need for abandoning the pneumothorax. Dr. Penington went on to say that the treatment of tuberculous empyema was a medico-surgical problem, and each case required individual consideration. The most important aspects determining the plan of treatment were the condition of the contralateral lung and the degree of pulmonary function present. Aspiration and pleural lavage were rarely effective in healing an empyema, and surgical drainage combined with collapse of the chest wall or excision was usually required. Successful treatment must produce three results: (i) the pleural infection must be completely controlled; (ii) the disease in the underlying lung must be controlled; (iii) there must be no undesirable sequelae, such as persistent sinuses, postural defects or respiratory insufficiency. In conclusion, Dr. Penington said that the advent of streptomycin, penicillin and para-amino-salicylic acid had increased the range of surgery in the treatment of tuberculous empyema to such a degree that excision of the entire diseased area had become possible.

L. I. HENZELL (Perth) said that while Dr. Penington's paper was comprehensive and largely non-controversial, there was a great divergence of views in the literature in regard to recommendations for treatment, a divergence exemplified by the number of preparations suggested for pleural lavage, the latest of which was para-amino-salicylic acid; that perhaps did offer some hope of usefulness. Dr. Henzell emphasized the importance of preventing the development of empyema, and was convinced that if artificial pneumothorax was properly handled empyema would become rare. Actually in Perth there had been no case of empyema complicating artificial pneumothorax for nearly two years. If empyema did occur, the problem of treatment was urgent. Chandler, of England, had reported on the advantages of conservatism; but Chandler's conservatism in treatment was not one of mere inactivity. All workers had encountered cases in which repeated emptying had been successful; but such cases were rare, and usually surgery had to be invoked to obliterate cavities, the tendency now being to proceed to early thoracoplasty. Dr. Henzell said that there was one thing he would like to know: when was an empyema an empyema, or in other words, when was pus, pus? In his view pus was pus when it was microscopic and not only macroscopic; there were many cases in which there was no macroscopic pus or nothing more than slightly turbid fluid, but he still regarded them as cases of empyema. He was reluctant to set arbitrary time limits, but agreed with Dr. Penington that six weeks was in most cases a period beyond which

more active measures should be instituted if there was not a good response to conservative treatment.

COTTER HARVEY (Sydney) was of the opinion that many of the younger physicians tended to use too little pressure in artificial pneumothorax because they were afraid of positive readings on the manometer. He was sure that in many cases the pleuro-pulmonary fistulae referred to by Dr. Penington closed spontaneously, because if they did not a lung would never reexpand. He thought that oxygen lavage assisted expansion in many cases. He agreed that emphasis on artificial pneumothorax as a cause of empyema was correct, and referred to a sanatorium in the United States of America which claimed that it never had a case of empyema because none of its patients was treated by artificial pneumothorax.

Alan Penington (Melbourne), in reply, said that his reference to a six weeks' period of conservative treatment before the institution of more active measures was not meant to imply the setting of any arbitrary period. The point he wished to make was that it was futile to persist with conservative methods if they were not doing any good. However, if they were, then persistence with those methods was justifiable beyond the period he had suggested. In his view pus was "laudable pus"—a creamy, thick material, the microscopic pus referred to by Dr. Henzell being merely a suspension of cells in a liquid medium. Referring to positive pressures in pneumothorax, Dr. Penington said that it was his opinion that unless inspiratory and expiratory pressures were specified, what was meant by "positive pressure" was the mean of those pressures. He had seen oxygen lavage used in the United States of America, but thought that the patients given that treatment would have done just as well without it.

The Native in Relation to Public Health.

C. E. COOK (Perth) read a paper on the native in relation to the public health. He said that the evolution of the Australian aboriginal in an environment free from epidemic and endemic disease, and under a civilization which included no community life, had left him completely unadapted for integration into the white social structure. For generations he had with impunity disregarded the first principles of hygiene and had developed habits and practices incompatible with hygienic security in an organized community. No effort had been made by the white man to educate the black and his hybrid descendants in the precautions necessary to be taken when community life was substituted for untrammelled migration. A number of acute and chronic infections had been introduced and had attained a high incidence in the coloured population. The natural increase in the hybrid population was much greater than that of the white population in certain areas, and it appeared probable that the former, already constituting a substantial proportion of the population, would ultimately dominate it in those areas. The incidence of disease in the coloured component of the population, and the insanitary standards of its existence, involved serious risk to the health of the white population. Furthermore, the low standard of hygiene characterizing native communities in the north would imperil the security of the white population of Australia at large, should diseases requiring quarantine be introduced by air. Prompt action was necessary to raise the standard of living of coloured races in Australia and to integrate the aboriginal hybrid into the general population.

JOHN DALE (Melbourne) expressed the opinion that the paper was of the first importance and dealt with a pressing problem that should receive wide publicity.

A. J. METCALFE (Canberra) asked Dr. Cook whether there had been a spread of amœbic dysentery in northern Australia.

C. E. COOK replied that no survey had yet been made to enable that question to be answered.

D. LETHAM (Perth) said that the community had been grossly negligent in its attitude to the natives, and had treated them in such a shoddy fashion that there had now

arisen a public health problem which would force the community to take some remedial action.

J. B. Hogg (Perth) said that the problems presented by Dr. Cook were not easy of solution, and more than the question of money was involved. When the first settlers came up the Swan River there was a black man sitting on the bank, who retreated to the country, leaving his son behind him. That son was taken up by the settlers and made an intermediary between the whites and the blacks—in fact, he was the pet of the settlement; yet when he died not many years later he was the last of the Perth tribe of aborigines. The problem therefore was not merely a matter of good intentions; the native people had had their whole lives disrupted. Dr. Hogg felt that it was essential to give the aboriginal an insight into the white man's philosophy, and that could not be done by segregation; it was necessary to evolve new methods.

H. K. Fry (Adelaide) said that in his State he had been told he was a voice crying in the wilderness when he expressed the view that the problem was essentially one of giving the native the opportunity of recovering his self-respect. So long as the white man continued to push the black about, there would be no solution; the native did not like being "pushed about" by a foreign community any more than white people would themselves. The present system of protection was to give a white man authority over the black, and the protector was not a man to whom the black could look for any common interest. What Dr. Fry thought was really needed was a system of giving to the native the opportunity of being brought under a system of native discipline, under which in past times he had lived. Such a community existed in the Flinders Range under a half-caste director, who had resurrected enough of ancient customs to give the natives the belief that they were black men. When Dr. Fry had visited that community with a university party, he found that the party was suspected of being "government men" who were going to interfere, and the leader of the community had said: "If they take this away from us we are dogs." The natives were not unintelligent, and they should be allowed to form their own local district councils, which would restore to them their self-respect and lift them out of their present degrading conditions of existence. The failure of mere good intentions was shown by the situation in Darwin, where the Government had built bungalows on stilts for the natives, who promptly moved in under the houses and would not live in them.

At the conclusion of the discussion the following resolution was carried unanimously:

That this section requests the executive of congress to take steps to impress upon State and Federal Governments the urgency of the health aspects of the problem of the aborigines as presented by Dr. C. E. Cook.

Jottings from a Public Health Laboratory.

A. NEAVE KINGSBURY (Perth) read a paper entitled "Jottings from a Public Health Laboratory". Discussing first fluorosis, he said that regular surveys of children in one of the poorer metropolitan districts, commenced in 1942, had revealed "mottled" teeth in a few of the children; the condition, of which fluorine was held to be causal, had not previously been reported in the State. Turning to leptospirosis, Dr. Kingsbury said that up till the appearance of the departmental annual report for 1944-1945, only one case had been recorded, and in that the diagnosis was not confirmed; in the annual report mentioned, the occurrence of a disease with a fairly clear-cut clinical picture was recorded among the abattoir and meat inspection staff, and sporadic cases still continued to appear. Agglutination tests undertaken at the Queensland Institute of Medical Research resulted in the agglutination of *Leptospira pomona* to a titre of one in 1000. Investigation had proved difficult, because only one or two cases occurred yearly, and also because the febrile period had passed by the time a medical certificate was received. But the staff at the factory concerned was now on the alert. It was intended also to investigate the incidence

among pigs and among cattle. Dr. Kingsbury then referred to bather's itch, which afflicted persons bathing in two areas in a series of inland lakes of varying salinity. Snails identified as *Hydrococcus graniformes* were found at the water's edge, and occasional specimens harboured numerous cercariae. Professor T. Harvey Johnston considered that they were unlikely to cause bather's itch, and that another species of snail perhaps living on the mud in a few feet of water might be the host of the cercariae involved. The lakes were bird sanctuaries, and it seemed that the condition was a form of dermatitis following attack by cercariae of a fluke inhabiting one or other species of the birds. Investigations would be recommenced when the warm weather returned. *Brucella abortus* infection and the occurrence of abortion was next mentioned. An investigation of the causes of abortion and stillbirth had been begun in 1946. Agglutination tests for *Brucella abortus* had been carried out for 167 aborting women and for 63 normal pregnant women. When "interference" cases were excluded from the former group, 10% of the patients were found to have agglutinins to a titre of one in 100 or higher; the corresponding percentage among the controls was 9.5%. Although the figures were small, it was thought that *Brucella abortus* infection could not be considered a major cause of human abortion. Turning to typhus fever, Dr. Kingsbury said that it was becoming increasingly prevalent. In the past four years the incidence had been 68, 86, 100 and 133 cases. Over 80% of the cases occurred in the metropolitan area; less than 10% arose at distances greater than 30 miles from the sea. Males were affected slightly more often than females. Only 7% occurred in children aged under fifteen years; thus house infections were relatively uncommon. Many of the patients were employed in places where rats were prevalent. In Western Australia typhus fever was sometimes accepted for compensation as an occupational disease. Cases occurred in every month of the year. There appeared to be a rise from February to April, a fall from October to January, and possibly a minor peak in July. The disease had been assumed to be murine typhus, *Xenopsylla cheopis* being the probable insect vector. The continuance of a considerable number of cases throughout the colder months was surprising. Clarification of knowledge of the aetiology was urgently necessary, and investigations were to be undertaken.

A Hospital Service for Western Australia.

J. GORDON HISLOP (Perth) read a paper entitled "A Proposed Hospital Service for Western Australia", in which he outlined the principle of zoning of hospitals within the State of Western Australia. He said that modern hospital planning had laid down certain fundamental bases: (i) There must be a decentralization of medical services from the metropolis into defined zones. (ii) There must be centralization of medical services within those decentralized zones. Other factors had become accepted in the demarcation of such zones. (iii) The greatest distance to be traversed by road by a patient to the hospital of the zone must be not more than thirty miles. (iv) The site of the hospital within the zone must be determined by trade routes and governed very largely by the availability of power and water. (v) The smallest economical and efficient size of a hospital within a zone was fifty beds. Dr. Hislop then outlined the division of hospital services in the State into transport areas (according to road and/or air transport). He listed the functions of a zone hospital as: (a) to bring the modern advances of medicine and surgery so far as it was possible within reasonable distance of the homes of those living outside the metropolitan area; (b) to provide for the medical practitioners of the zone means by which efficient modern methods of diagnosis and investigation were freely available; (c) to provide a hospital which was economic and efficient and in keeping with modern standards and requirements. The necessity for health centres at the periphery of the zones was also shown. Dr. Hislop emphasized the fact that zoning was the medium through which modern facilities for laboratory services for diagnosis and for treatment maintenance might be provided throughout the State. Finally he advanced reasons to show

that the junction of public health and civilian practice was both possible and desirable.

JOHN DALE (Melbourne) said that he thought it was desirable that the States should experiment in the evolution of medical services, as it was possible that the best solutions would vary from State to State.

J. THORNTON (Mount Magnet) said that he had practised in an isolated area; he agreed largely with Dr. Hislop's plans, but thought that they were perhaps Utopian. While he agreed with his ideals, he thought the medical profession should come down to earth and see the position as it was. He expressed dissatisfaction with the state of affairs in many country hospitals, an attitude based on personal experience, and attributed the position to the current system of State health administration. He considered that the urgent need was for administrative reform.

H. W. ILLINGWORTH (Kalgoorlie) said that he also had worked in the outback and could support all that Dr. Thornton had said. He thought there would be immense difficulties in properly equipping small hospitals in line with modern methods, and wondered whether there was any solution of the problems of such hospitals. If a zoning system was to be introduced and small hospitals were closed, what was to become of the medical services in those towns? Were the doctors to be compensated if their practices were destroyed by removal of hospitals or reduction of their status? He was sure local people wanted their local hospitals and desired their improvement. He thought that improvements could be effected (i) by the adoption of Dr. Hislop's suggestion of more extended use of air transport, (ii) by fuller cooperation among doctors in the remote areas, (iii) by the posting of young men with experience to isolated areas for a maximum period of three years, and (iv) by giving to all men in isolated areas the right to free post-graduate education at government expense.

H. S. LUCRAFT (Perth) supported both Dr. Hislop's long-term plan and Dr. Thornton's plea for immediate amelioration of present conditions. One of the main difficulties he considered was that the Public Health Department was not actually under the control of a medical man. Admittedly the problems were largely of a local political nature; but he hoped congress could assist in their solution. He was sure that in two or three months the efficiency of country hospitals could be increased many hundreds of times; they could do a much better job if they were allowed to.

C. STANLEY (Bendigo), speaking as medical superintendent of the Bendigo Base Hospital and after ten years' experience in that office, thought that the Victorian system of hospital control worked very well, although the Public

Health Department and the Charities Board were not under medical authority. In his own hospital the secretary and chief executive officer was a layman; but no conflict arose, because the lay managers of hospitals were being trained under a system of apprenticeship for clerical staffs evolved by the Charities Board. He had never had a reasonable request refused by either the executive officer of the hospital or the committee. Dr. Stanley made a plea for the retention of the small hospitals. He admitted that they were difficult and perhaps expensive to staff; but they were necessary institutions and could be good. He also thought that it was the duty of the medical staffs in base hospital towns to help the outlying smaller hospitals and be willing to improve their standards. In his view the transport of patients for thirty miles as suggested by Dr. Hislop was in many cases too great a distance, and he thought that in fact some patients, such as women in labour, should not be transported at all.

C. H. DICKSON (Melbourne) supported the plea of Dr. Stanley for the retention of the small hospital, and referred to the admirable work done in Victoria by the Bush Nursing Hospitals, of which there were now about 65 providing over 700 beds. He was not convinced that such hospitals were unduly expensive; in fact he thought that most of the now embarrassingly high expense was associated with the larger hospitals. Admittedly the small hospitals were difficult to staff; but perhaps the solution lay in the establishment of a nursing service offering proper conditions of salary and superannuation to women prepared to make such a service their career. Under such a system there could be a pool of nurses which could be drawn upon to meet staffing emergencies in times of stress. He hoped that those dealing with the problem would remember that they were dealing with human beings, and not pawns to be transported hither and thither to zoned hospitals.

John Dale (Melbourne) said that he thought it was the responsibility of the medical profession to guide and advise the public in medical affairs, and it was not fair to the public to leave the problem in the hands of a few government officers.

J. G. HISLOP (Perth), in reply, said that in his paper that morning he had quoted from the report he had recently made to the government of Western Australia following his investigation into the problems of hospital provision for rural communities in the United States of America; but time had not allowed him to deal fully with all he had said in that report. He did not wish it to be thought that he favoured the immediate abolition of small hospitals, but he was of the opinion that the small hospital situated within thirty miles of a good "zone hospital" would eventually disappear.

Section of Radiology and Radiotherapy.¹

President: Val McDowall, M.B., Ch.M., F.R.A.C.P., F.F.R., Queensland.

Vice-Presidents: A. T. Nisbet, M.B., Ch.M., D.P.H., F.F.R., New South Wales; J. Stanley Verco, M.B., B.S., South Australia; W. P. Holman, M.B., B.S., F.R.A.C.P., F.F.R., Tasmania; Keith Hallam, B.A., M.B., B.S., D.M.R. and E., Victoria; W. R. Frayne, M.B., B.S., D.M.R.E., Western Australia.

Honorary Secretary: M. G. F. Donnan, M.B., B.S., D.R., Western Australia.

President's Address.

VAL McDOWALL (Brisbane) took as the subject of his presidential address the early history and progress of

radiology, illustrating it with lantern slides prepared from the pages of *Archives of Skiagraphy* and (as it later became) *Archives of the Roentgen Ray*. Early types of apparatus and radiographs were shown, the formation of the Roentgen Society and the first presidential address were discussed and an account given of the first X-ray apparatus introduced into Queensland by Dr. Charles

¹ The meetings of the Section of Radiology and Radiotherapy with the Section of Public Health, Tuberculosis and Tropical Medicine and with the Section of Orthopaedics and Physical Medicine have already been recorded.

Marks. Dr. McDowall said that radiology had passed through four phases or periods of progress: (i) the period of the induction coil and gas tube between 1896 and 1914; (ii) the period of the interruptorless transformer and hot cathode tube from about the middle of the first world war to 1926; (iii) the period of valve rectification and shock-proofed apparatus from 1926 to 1939; (iv) the period of atomic energy, the uranium pile, the atomic bomb and radioactive isotopes, which ushered in the reign of the physicist specializing in radioactivity as applied to medicine. Improvements which had been developed in aids to diagnostic radiology included: (i) the Coolidge tube and subsequent improvements until the present day, the rotating anode tube and high voltage therapy tubes; (ii) the improvement of film emulsion and the introduction of acetate film base, resulting in more rapid exposures and eliminating fire risks; (iii) the Potter-Bucky diaphragm from the early curved type to the present-day flat high-speed and electrically controlled type; (iv) intensifying screens; (v) the use of contrast media in radiography. The history of radiotherapy began with early attempts to treat skin cancer in 1896. Radium was discovered in 1898 and then followed high-voltage X-ray therapy and treatment by γ rays of radium. The Commonwealth Government about 1927 purchased several grammes of radium for distribution on loan to the States.

W. R. FRAYNE (Perth), from the chair, thanked Dr. McDowall for his interesting survey and particularly for his masterly presentation of the early story of radiology.

A. SYME JOHNSON (Perth) said that Dr. McDowall's careful documentation of the subject made the paper stand out in relief from the brief summaries that were apt to appear in text-books. Dr. Johnson wished to bring to the attention of members the early work in Australia of Dr. Fred Clendinnen (father of Dr. L. J. Clendinnen) and of Dr. Herbert Hewlett. Those two had been interested in electricity and as a hobby had made many induction coils and had investigated the functions of the Crookes tube. When the news of Röntgen's discovery reached Melbourne, Clendinnen and Hewlett soon built their own apparatus, and X rays were being used in Australia not long after the big discovery. It was interesting to note that the first picture taken in Melbourne was one taken of a hand by Dr. Hewlett, and the exposure time was forty-four minutes. It would be interesting to obtain from Dr. Hewlett and Dr. Clendinnen the dates and further details of those early experiments.

Osteogenic Sarcoma.

R. KAYE SCOTT (Melbourne) read a paper on pre-operative radiotherapy in the treatment of osteogenic sarcoma. He said that connective tissue tumours were regarded as radioresistant because they did not respond to the usual techniques in which large doses were administered over periods of one to four weeks. The method advocated attacked the mitotic sensitivity of cells of connective tissue origin by the use of repeated small doses spread over a course lasting ten weeks. Repeated courses of the same duration were given after suitable rest periods. The technique was designed to produce local tumour recession. The patient was then allowed sufficient time for it to be demonstrated that secondary deposits had not developed. The appearance of metastases meant that active treatment had to be suspended. Amputation of the affected area, if practicable, was advised at the end of eighteen months provided that local response to the irradiation had been satisfactory and that the lung fields remained clear of secondary deposits. It had been observed that early surgery seemed to accelerate the appearance of secondary deposits. Preliminary irradiation with the technique described inactivated the tumour locally in many cases and it was likely that the flooding of tumour emboli into the blood stream was stopped relatively early. Surgery could then be undertaken at a more favourable time. Dr. Kaye Scott presented the results of treatment of 22 patients by the method described. Four of the patients had osteogenic sarcoma supervening on Paget's disease and derived no benefit. Of the other eighteen, eight showed local response without the sub-

sequent development of metastases within eighteen months; five showed local response with the development of metastases within eighteen months and further treatment was suspended; five showed no local improvement with the initial irradiation treatment. Thus the technique had temporarily controlled more than two-thirds of the treated cases of osteogenic sarcoma and so was an advance on previously described methods.

W. R. G. FRAYNE (Perth), from the chair, thanked Dr. Kaye Scott for his able presentation of the subject. He considered the question of the treatment of osteogenic sarcoma a difficult one; but felt that the method of treatment outlined in the paper was a real advance.

F. DUVAL (Sydney) congratulated Dr. Kaye Scott on his results, and said that the response to the course of therapy obtained in 13 cases out of 18 gave a very good indication of its efficacy. While reviewing the cases of osteogenic sarcoma treated at the Royal Prince Alfred Hospital, Sydney, over the previous twelve years, Dr. Duval had found that only two patients had survived for more than two years. Those patients had had an amputation soon after an intensive course of therapy. Dr. Duval's experience varied from that of Dr. Kaye Scott in regard to osteogenic sarcoma following Paget's disease, as two patients out of a series of six whom he had observed showed some improvement; the swelling and pain became less, and the two patients were living twelve months after the commencement of treatment. Irradiation, therefore, was worth trying in all cases.

A. J. NELSON (Perth) said that in the treatment of osteogenic sarcoma the outlook for patients was gloomy, and the condition had been described by some as a radio-resistant disease. However, it might be that the prognosis was as much dependent on the type of treatment given as on the type of tumour cell treated. Until recently, intensive courses of therapy, in which large doses were given over a short period, had been used as for epithelial tumours. It would appear that a connective tissue tumour such as the osteogenic sarcoma responded better to smaller doses over a longer period. Dr. Nelson finally asked how large a field was used in relation to the size of the tumour in Dr. Kaye Scott's series of cases.

A. A. MERRITT (Perth) asked Dr. Kaye Scott how radical an amputation had to be when carried out after the arbitrary period of eighteen months.

A. MURRAY CLARKE (Melbourne) said that as a result of Dr. Kaye Scott's work, the scheme of treatment at the Children's Hospital in Melbourne had been altered from amputation followed by deep therapy to the routine outlined by Dr. Kaye Scott. As a result the results had been more encouraging than they used to be.

A. SYME JOHNSON (Perth) said that he would offer only one generalization. From long experience in radiation therapy in all its branches, he had found that the prevention of damage to the connective tissue bed of the tumour was most important, and he believed that such damage had to be kept to a minimum if good results were to be obtained.

R. KAYE SCOTT (Melbourne), in reply, thanked the various speakers for their reception of his paper. In reply to Dr. Nelson's question about the size of the field to be used, he said that he could only generalize. However, a safety margin of at least five centimetres should be included around the margin of the tumour. Difficulty in covering the area might be experienced in the case of large tumours, but Dr. Kaye Scott thought that a large field was best covered by increasing the focal skin distance. The use of two fields to cover a large area, in his opinion, was to be deprecated, as it was always difficult to prevent overlapping of the fields, or, on the other hand, a gap might be left between the fields. With regard to the question of the site of amputation after the prolonged course of therapy, Dr. Kaye Scott thought that a greater degree of conservatism could be used. Nevertheless, a sufficient margin had to be left, because, if the amputation was carried out through the periphery of the tumour, an activation of the tumour cells might occur. Dr. Kaye Scott

rence of symptoms after cholecystectomy. With regard to the management of acute cholecystitis, he said that it was seldom necessary to operate as a matter of urgency. It was preferable to wait until the acute symptoms had abated, so that after some days cholecystectomy was possible. However, if the symptoms were progressive, cholecystostomy was performed with the least disturbance, as cholecystectomy might be necessary later. Exploration of the common duct was carried out either via the cystic duct or through a separate incision in the common duct. The object was to remove any stones if present and to prove that there was a free passage through the common duct to the duodenum. The best method of doing so was by the passage of sounds, such as Liston's or Hagar's dilators. Sounds of increasing size were used until the largest the duct would accommodate passed. The smaller-sized sounds might by-pass a stone; but those of larger size would push a stone on and become obstructed. After removal of the stone more of the larger sounds were used. If a stone was firmly impacted in the papilla of Vater, it was removed transduodenally. The opening in the duodenum was made transversely to avoid hæmorrhage. A search was made for stones in the hepatic duct; Dr. Edye drew attention to the danger of pushing them up out of reach. He referred in some detail to stricture of the common bile duct, and mentioned the danger associated with two particular types of gall-bladder disease—the small, contracted and firmly adherent gall-bladder, and the so-called "easy gall-bladder" which could be delivered freely into the wound and was easily removed. Dr. Edye advocated immediate repair of any injury by careful suturing of mucosa to mucosa. He said that when the possibility of a stricture of the common duct was not considered until a few days after operation because of the advent of jaundice or the development of a biliary fistula, the earlier operation was performed, the better. Prolonged delay in the presence of obstructive jaundice caused biliary cirrhosis. Of the many methods of repair, end-to-end anastomosis after mobilization of the duodenum and the head of the pancreas was best. The use of vitallium tubes was not satisfactory. When the distal portion of the duct was unrecognizable, Walton's method of anastomosing the duodenum to the proximal stump of the duct might prove successful, provided an accurate anastomosis of mucosa to mucosa was possible.

ALAN E. LEE (Brisbane) in opening the discussion said that the subject was full of debatable points. He disagreed with the opinion put forward by Dr. Hurley that the basic origin of biliary disease was cholecystitis leading to gall-stone. He did not accept the text-books in that regard, but had to believe his own eyes. He considered that cholecystitis was secondary to silent stone; in other words, the first stage was a "quiet" stone. He considered that that was the primary condition, and that a certain proportion of patients developed symptoms and signs which were probably bacterial in origin. He was of the opinion that the inflammation was a chemical inflammation somewhat akin to that seen in acute pancreatitis. He then referred to the indications for cholecystectomy. As 20% of all people had gall-stones, he did not consider that the mere presence of gall-stones or one attack of biliary colic or cholecystitis was a valid indication for cholecystectomy. He thought that attacks should be treated medically, but that if the symptoms recurred or became established, then operation should be considered. He did not believe that the presence of gall-stones or even of gall-bladder disease gave rise to dyspeptic symptoms. He referred to the fact that a patient might even have gangrenous cholecystitis without any symptoms of indigestion, and asked how often one saw young people with gall-stones who had never had any previous indigestion. He was of the opinion that it was a doctor-induced anxiety state. He had not adopted opening of the common duct as a routine measure without definite indication such as jaundice or dilatation, or when from the history of the patient he was certain that there was some obstruction to the common duct. Surgery of the bile tract was the surgery of gall-stones.

A. E. COATES (Melbourne) said that surgeons were not in agreement as to the primary cause of inflammation of

the biliary duct, and discussion soon developed into an argument of infection *versus* stone. He considered the typical case of acutely inflamed gall-bladder to be similar to one of acute appendicitis. Should the condition not subside within forty-eight hours, he believed that operation was indicated and cited cases in the Royal Melbourne Hospital in which rupture had occurred owing to delay. Rupture of the gangrenous gall-bladder might lead to subphrenic abscess or abscesses in other positions. He considered that cholecystectomy was the operation of choice, especially to the casual surgeon, or if there was any doubt whether a more serious procedure could be carried out. He did not think that covering the raw area with peritoneum was easy, and if that could not be successfully done, he recommended the use of "Oxycel" gauze. His experience with "Dicumarol" had been unsatisfactory, and he had had diverse results in the estimation of the prothrombin level from the pathological department on two specimens collected from the same patient at the same time. The use of "Dicumarol" should always be stopped when signs such as petechial hæmorrhages, epistaxis, or other similar symptoms or signs appeared. In a patient requiring drainage, he advocated strenuously the retention of the drainage tube until all signs of drainage had ceased for two or three days.

LEO DOYLE (Melbourne) referred to the technique of the removal of the gall-bladder and the use of the Kocher incision, and demonstrated how that incision when properly made missed the intercostal nerves. The use of the incision, however, depended upon the type of patient, and could be successful only in those patients with a wide subcostal angle. In the narrow, virginal type of abdomen, Dr. Doyle demonstrated how the right rectus incision was to be preferred. He said that he did not use any type of rest because rest led to post-operative backache. For relaxation he depended upon satisfactory anaesthesia, and he advocated the use of spinal anaesthesia or cyclopropane. For uncontrollable hæmorrhage from the gall-bladder bed, he used the diathermy current as a coagulating agent. He also used that method when removing the gall-bladder from the fundus. With that method there was an absence of hæmorrhage, and the surgeon was able to isolate the structures at the duct satisfactorily. Dr. Doyle advocated application of the omentum to the area of operation in order to keep the duodenum from adhering to the area of the gall-bladder bed. That made easier any subsequent operation that might become necessary and also obviated the formation of a duodenal fistula, should the duodenum be damaged at operation. He used non-absorbable sutures and believed in early ambulation of the patient.

F. GILL (Perth), from the chair, referred to the post-cholecystectomy syndrome. In a number of cases of that syndrome, in which the gall-bladder had been removed five or six years previously, he had commonly found a condition of right hydronephrosis. He referred to difficulty in the diagnosis of such cases, and described a patient who had consulted him with two different types of pain, one typically that of biliary colic and the other that of right renal colic. Graham's test revealed a normal gall-bladder, while a retrograde pyelogram revealed right hydronephrosis. At operation for a kidney condition it was decided to explore the gall-bladder region, when a large stone was found in the gall-bladder. The gall-bladder was removed with relief to the patient. Dr. Gill considered it extremely difficult to diagnose early biliary disease, and held that a good history was absolutely necessary.

J. E. F. DEAKIN (Sydney) referred to the case of a patient with a stone in the common duct at the junction of the two hepatic ducts, and also a collection of debris in both hepatic ducts and in the common ducts, forming a "Y"-shaped stone. At operation the common duct was severed and repaired over a "T"-shaped rubber tube. Subsequently the patient was operated on again and the tube was removed, and at the second operation the common duct was repaired over a plain straight rubber tube. The patient made an excellent recovery, and that tube had never been removed. The operation had taken place many years earlier, and the patient was still in good health. Dr. Deakin was of the opinion that much post-operative colic was due to the use of morphine.

Victor Hurley (Melbourne), in reply, considered that the discussion had been helpful. He said he could not usefully debate with Dr. Lee at that meeting the subject of infection *versus* stone. That could better be done over a fireside chat. He agreed entirely with Dr. Coates. In dealing with multiple stones in the common duct, he said that it was often difficult to know when all stones had been removed, but was of the opinion that the original stone was often round, and he believed that if that round, non-faceted stone was removed, one could presume that all had been accounted for. He agreed with Dr. Doyle concerning the Kocher incision, but still considered that a well-given ether anaesthetic was the best. Referring to Dr. Gill's remarks, Dr. Hurley agreed that hydronephrosis was a common accompaniment to the post-operative pain and recommended that excretion pyelography should be carried out in all cases.

Biopsy Studies in Diseases of the Gall-Bladder and Obstructive Jaundice.

J. W. PERRY (Melbourne) presented some observations on biopsy studies in diseases of the gall-bladder and obstructive jaundice. He said that biochemical tests, with the clinical history and physical examination and radiological evidence, were in many cases sufficient to establish the diagnosis. In other cases aspiration biopsy of the liver might be needed as well, if unnecessary laparotomy was to be avoided in cases of jaundice. Obstructive jaundice was associated with characteristic histological changes in the liver; such changes appeared soon after obstruction occurred. Biliary cirrhosis was a disease secondary to bile duct obstruction. The stage set for its development had been observed in biopsy studies of the liver of patients whose jaundice was of short duration. Dr. Perry reported a case in which aspiration biopsy revealed changes typical of obstructive jaundice and at the same time fat accumulation of moderate degree in the liver. He suggested that that accumulation was probably due to malnutrition, and that it indicated a degree of impairment of liver function sufficient to explain the unexpected post-operative collapse of the patient.

ALBERT GILD (Perth) referred to the technique of the use of liver biopsy as carried out under direct vision through the peritoneoscope. In his opinion liver biopsy performed through the peritoneoscope was safer than the blind needle technique. There had been a small but definite mortality from blind liver biopsies, which was greater than the over-all mortality for the performance of peritoneoscopy. With the peritoneoscope, hæmorrhage was controlled by diathermy coagulation. Secondly, by use of the peritoneoscopic method a selective biopsy could be made, it being possible to choose within limits the site from which the fragment of liver was taken. It was acknowledged that, when the peritoneoscopic biopsy forceps were used, only the free edge of the liver was available for the taking of a snippet. It was quite possible, however, to use one of the two usual liver biopsy needles in conjunction with the peritoneoscope in order to take the material from the depths of the liver substance. In that way the peritoneoscope gave all the advantages of the needle technique, without the dangers of using it blindly and without the risk of hæmorrhage. Attention was also drawn to the great value of the macroscopic examination of the liver surface which the peritoneoscope permitted. In the combination of peritoneoscopy with biopsy, surgeons had a valuable aid to the differential diagnosis of medical from surgical jaundice. Where liver function tests failed to differentiate or gave results that were equivocal, Dr. Gild had found that in a considerable proportion of such cases macroscopic examination of the liver and its environs with the peritoneoscope supplied the information required and saved a considerable number of unnecessary laparotomies. When the macroscopic examination was inconclusive, the further step of a biopsy performed through the peritoneoscope was almost always conclusive. The histological changes were usually clear cut. In cases of extrahepatic obstruction, the bile thrombi in cells and capillaries, the absence of massive destruction of liver cells

and the absence of round cell infiltration of the interlobular connective tissues were characteristic. The extensive ablation of liver cells, particularly in the central lobular areas, the infiltration with inflammatory cells and the absence of bile thrombi, were characteristic of hepatitis. Dr. Gild believed that there was a permanent and practical use for liver biopsy if performed in conjunction with peritoneoscopy. It was valuable in those difficult jaundice problems in which diagnosis was uncertain, when laparotomy would be contraindicated and dangerous in a case of hepatitis, and when its omission would be even more hazardous in a case of obstructive jaundice amenable to operation.

Abdominal Incisions.

ALAN E. LEE (Brisbane) read a paper entitled "The Making of Abdominal Incisions", in which he made a plea for the general abandonment of vertical abdominal incisions in favour of transverse or oblique incisions. He pointed out that the vertical paramedian incision was designed for operations which commenced as exploratory diagnostic procedures. At the present day, when operations were usually for purely therapeutic purposes, transverse or oblique incisions were more desirable in that they gave better exposure, were less likely to be associated with immediate post-operative complications and resulted in a lessened incidence of scar hernia and of late intestinal obstruction. Dr. Lee discussed the objections sometimes raised to the use of transverse incisions and described the technique of making the incisions.

L. DOYLE (Melbourne) expressed general agreement with Dr. Lee. He pointed out that to the surgeon unaccustomed to transverse incisions, the rectus muscles were very frightening, standing out boldly and daring the surgeon to cut across them. The rectus muscle was a complete bluff; when one cut it, it did not retract, and one did not find a hernia occurring through it. In making transverse incisions he advised due respect for the nerves; while one nerve could be cut with safety, because of the overlapping of the nerve supply of the abdominal wall, more than one should not be cut. He agreed that the incision in the abdomen was designed to give access to the organ to be operated on; but it was still essential to have adequate anaesthesia. He agreed with Dr. Lee on the question of a continuous suture for the posterior layer of the sheath. He now used a suture of a 32 to 34 gauge stainless steel wire as a routine measure, continuous in the posterior sheath and interrupted in the anterior sheath. Referring to two further points, he said that he did not care to put a drain through his main wound—he preferred a stab wound—and that he liked to seal his wound after suture by strapping "Elastoplast" over the dressing.

A. E. COATES (Victoria) agreed with Dr. Lee on the matter of transverse incisions and used them a lot. He offered one suggestion: in an oblique incision in a fat patient, he stitched the skin and fat to the muscle, in order to convert the incision into a gaping hole. That did away with the need for a large retractor.

VICTOR HURLEY (Melbourne), from the chair, said that he was in agreement with the comments of Dr. Lee, and pointed out that peripheral abdominal incisions had been used many years previously by MacCormick and others. He thought that the paramedian incision had become popular because of the introduction and the popularity of the self-retaining retractor. Nowadays most of the abdominal incisions did not need the use of retractors if the incision was well placed. Vigorous retraction could now be avoided, which was to the patient's benefit.

Hæmorrhoids.

JOHN TURNER described by means of a paper and a film his technique of treatment of hæmorrhoids.

L. E. LE SOUEF congratulated Dr. Turner on the excellence of his film showing his technique. He said that the method appeared to be a combination of the Lockhart-Mummery ligature method with Gabriel's preliminary dissection. Dr. Le Souef did not use any tube or pack of

any description, depending entirely on "Vaseline" within the rectum and also as a dressing externally. It was not generally recognized that complete healing of the operation area took six to eight weeks. It was thus important that the surgeon should keep the patient under observation until that period had passed, otherwise complications such as stricture might prove embarrassing to him. Dr. Le Souef was in accord with all that Dr. Turner had said, but added that he always sought the pecten band and divided it, and was satisfied that that small procedure reduced the post-operative discomfort.

Indirect Inguinal Hernia Treated by Inversion of the Sac.

C. CRAIG (Launceston) presented the results in a series of 130 cases of indirect inguinal hernia treated by the method of inversion of the sac only. The series was commenced nearly three years before presentation of the paper and was concluded six months before the presentation. There had been three recurrences, giving a recurrence rate of 2.3%. It was emphasized that more time would have to pass before a final assessment could be made. Dr. Craig pointed out that of the two main methods of producing inversion, the method of inverting through the abdominal wall was the only suitable one for the ordinary thin pliable sac. The method had been used in 114 cases; there was only one recurrence, a direct one which was thought to be the result of trauma at operation. Inversion into the abdominal cavity was used in sixteen cases; there were two recurrences in that group, both apparently indirect, and as the sac was in both cases thin and pliable it was considered that the wrong technique had been followed in those two instances. In 58 cases carbolic acid in olive oil was introduced into the area occupied by the neck of the sac with the idea of producing fibrosis. There was no evidence to show whether it was effective or not. During the same period 35 patients were treated by the method of twisting, ligating and shifting the neck of the sac. There were no recurrences in that series, so that in all 165 patients had been treated by a simple method not involving interference with the posterior wall with a recurrence rate of 1.8%. In only six cases was the condition excluded on the score of size, so that 96% of all herniae presenting were considered suitable for the simple operation.

B. T. EDEY (Sydney) said that he was not a follower of that simple method of operating on herniae. Except when dealing with the very young, he always used a modified Bassini type of operation with repair of the posterior wall, strengthening the internal ring as well as possible and displacing the ring outwards. The recurrences he saw were mainly of the indirect sac type; but he could give no figures as to recurrence rate. All surgeons had to realize that whatever type of operation was performed, there would be recurrences in indirect hernia. Perhaps it would be wise to educate the general public to accept the principle that it was best in all cases to perform the simple operation first, and if recurrence took place, to operate again. He made that point for two reasons—because apparently the simple operation was not followed by a higher rate of recurrence than the more complicated repair, and because he for one could never determine whether a hernia was going to recur or not. He asked Dr. Craig three questions: (i) Did he set himself an age limit for operating? (ii) Did he keep his patients in bed, or use the new early ambulation post-operative treatment? (iii) What suture material did he use?

C. Craig (Launceston), in reply to Dr. Edey's questions, said that he laid down no age limit at all for that type of operation. The series of patients discussed had all been kept in bed for fourteen days and not sent back to work for two months; but he was now doing a series in which he was allowing the patient out of bed earlier and sending him back to work in six weeks. As to suture material, he used a fine silk. Dr. Craig asked Dr. Doyle, through the chair, believing that Dr. Doyle always opened the other side in a hernia, if he had found many sacs on the non-hernia side.

L. DOYLE (Melbourne) replied that he did in fact examine the other side, and on many occasions found a sac.

VICTOR HURLEY (Melbourne), in closing the discussion, spoke on the question of examination of the non-hernia side. In the case of young adults, on the least possible doubt, he advised that the other side should be examined. However, he had found it difficult to be sure whether a sac was present or not under such an examination. He might find a thickened crescentic border of peritoneum, and by stripping and teasing he finally produced what might be described as a sac. He was not sure that he had not produced the sac by manipulation.

Safety Factors in Colon Cancer Surgery.

H. H. EDEY (Melbourne) read a paper entitled "Safety Factors in Colon Cancer Surgery". He said that primary resection was a safe procedure when the patient had been adequately prepared and the intestinal bacterial content had been reduced by the exhibition of the appropriate sulphonamide. Primary resection was the treatment of choice in carcinoma of the right half of the colon, whether obstruction was present or not, because the onset of obstruction was so dramatic that operation was usually undertaken before there was any distension of the small intestine. After resection the ileum and the transverse colon might be united in an end-to-end, end-to-side or side-to-side manner, according to the indications. When the carcinoma was in the left side of the colon, primary resection and anastomosis were the method of choice when obstruction was absent. Suitable preparatory measures made the procedure safe, and it was no longer necessary to perform preliminary drainage proximal to the growth. However, that was a new departure, and many surgeons performed a safety-valve caecostomy at the time of resection. When obstruction was present, proximal decompression was necessary as a first-stage procedure. Transverse colostomy was the usual method, but with the development of modern chemotherapy caecostomy was likely to become popular again, in view of its advantages. At the preliminary operation it was essential that the liver be palpated for metastatic deposits; if these were present the procedure would be limited to proximal drainage or the establishment of a short circuit. The presence of hard, enlarged glands related to the growth was not a contraindication to ultimate resection; they were often merely involved in an inflammatory process. Palpation of the growth in the colon was not without danger; careless handling might cause damage to friable or infected bowel, with subsequent leakage. Fixity of the growth might be due to inflammatory changes only; even if fixation was due to malignant infiltration, such spreading areas should be excised during resection, unless they involved some vital structure. The safety of the anastomosis after colon resection depended on (i) accurate suturing at the site to prevent leakage, and (ii) maintenance of an adequate blood supply to the bowel at the site. To ensure safety, it was permissible to denude the cut end of the bowel or mesentery for one-quarter of an inch to form a cuff for neat suturing, provided that the minute vessels could be seen pulsating up to the cuff. Referring to transverse colostomy, Dr. Edey said that there were two main methods of performing it: (a) simple colostomy and (b) defunctioning colostomy. It was often impossible to remove all the hard faecal masses which had collected in the colon proximal to the growth; therefore the simple type of transverse colostomy was the better, and the apposed surfaces of the adjacent limbs of the colostomy might or might not be sutured together. If they were sutured together a spur was formed, which was crushed later, the colostomy being closed by an extraperitoneal operation. If they were not sutured together, closure was best effected by an intraperitoneal procedure with adequate safety measures. When the surgeon desired to perform a defunctioning colostomy, the mucous membrane bridge variety (after Wangenstein) was the easiest to make and to close. It was possible to reduce the *Bacillus coli communis* content of the faeces by the oral use of succinylsulphathiazole or phthalylsulphathiazole; the latter was recommended because of

its greater potency, and because it did not render the faeces fluid. Dr. Edey gave a number of details concerning chemotherapy; he considered that in colon resections the site of anastomosis should be dusted with penicillin-sulphonamide powder, and that penicillin injections and oral doses of sulphonamides should be given before operation. Chemotherapy should not be relied on to protect the patient from the results of indifferent surgery. Dr. Edey went on to say that the stomach of a patient with intestinal obstruction should always be emptied before a general anaesthetic was administered.

The patient should be taken to the operating theatre with the stomach empty and a tube in place. Anaemia was the only indication for blood transfusion before operation, and haemorrhage the only indication in the operative and post-operative periods. In the absence of obstruction before operation the parenteral administration of fluid was not required, but when obstruction was present saline solution should be given intravenously to replace the lost fluid. In the absence of obstruction the intravenous administration of saline solution in the post-operative period was of debatable value.

The Trade Exhibition.

THE Trade Exhibition Committee had at its disposal a considerable area in the Physics Laboratory. Space was allotted to a number of commercial houses. The following is a short account of the several exhibits.

MEDICAL RESEARCH PROPRIETARY, LIMITED, manufacturers of "Medco" ethers and ethyl chloride, took the opportunity offered by the congress of introducing their new products: "F.A.B." tablets (organic iron in linkage with amino acids and vitamin B), "Amino B Compound", and "Tri-Amino B" (plus 50% carbohydrate). Interest was shown in the new amino acid products particularly because they were for oral administration. The display was manned by Western Australian representatives of the exhibitors, O. E. Woods and Company.

RECKITT AND COLMAN (AUSTRALIA), LIMITED, had an interesting display of "Dettol". The top shelf was devoted to "Dettol" obstetric cream, while the lower shelf displayed "Dettol" antiseptic. On a shelf to the left was a dish containing instruments in a clear "Dettol" solution obtained by the addition of "Dettol" to surgical spirit. On the shelf opposite to this, many text-books were displayed in which the use of "Dettol" and "Dettol" obstetric cream for surgery and obstetrics was recommended.

SIGMA COMPANY, LIMITED, had a stand on which penicillin preparations were shown. These included penicillin tablets for oral administration, penicillin oily injection in the "Easifill" cartridge and ten cubic centimetre vials, penicillin eye drop sets, penicillin nasal drop sets, penicillin ointment, penicillin eye ointment, penicillin cream, penicillin lozenges, penicillin-sulphanilamide powder and penicillin in talc. The exhibit stressed the increasing use and importance of penicillin administered orally in the treatment of children. A photograph and explanation were presented of the Sigma "Easifill" cartridge formulated for the easy transference of penicillin-oil-wax to the hypodermic syringe. Other photographs depicted stages in a typical bacteriological assay, and also the Sigma Laboratories.

E. AND S. LIVINGSTONE, LIMITED, of Edinburgh, and EDWARD ARNOLD AND COMPANY, of London, through their Australasian representative, John Cochrane, of Melbourne, provided a display of medical books already published, and also details of forthcoming titles. Much interest centred round familiar works such as those by Watson-Jones, "Ten Teachers", Dunlop, Garrod, Batten and Thursfield, Conybeare, Topley and Wilson, *et alii*. Attention was also attracted by more recent books, such as Terence Millin's "Retropubic Urinary Surgery", Paterson's "Treatment of Malignant Disease by Radium and X Rays", Bishop's "Gynaecological Endocrinology" and Smout and Jacoby's "Gynaecological and Obstetrical Anatomy", *et cetera*. Three new journals were also shown: *The Journal of Bone and Joint Surgery*, *The British Journal of Plastic Surgery*, and the new abstracting service *Excerpta Medica*. The last-mentioned contains pertinent abstracts in English in the fields of clinical and experimental medicine from every available medical journal in the world, and is issued monthly in fifteen sections.

G.P. PROPRIETARY, LIMITED, showed a number of their medical products of Australian manufacture. Their various

preparations for the treatment of anaemia were prominently featured including "Polyhaemen" tablets, each containing five grains of ferrous sulphate with manganese, copper, cobalt and vitamin B₁ for use in hypochromic and microcytic anaemias; "Hepasol" (*Extractum Hepatis Liquidum B.P.*), a liver extract for oral administration, pleasantly flavoured, and containing all the factors of whole liver; "Hepasol Compound", combining liver, iron, minerals and vitamins, for use as a reconstructive tonic in convalescence. For supplementing the dietary in pregnancy and lactation "Neocal" tablets were shown; each tablet was stated to contain calcium diphosphate and ferrous sulphate with vitamins B₁ and D. "Rectinol Ointment" and "Rectinol Suppositories" for the treatment of haemorrhoidal conditions were also shown. "Multi-B" tablets were also presented; the tablets were stated to contain essential components of the vitamin B complex in balanced amounts.

BAYER PHARMA PROPRIETARY, LIMITED, had an exhibit which provided doctors with an opportunity of inspecting the original packings of many of their products. It was made evident that importations from England had helped considerably in overcoming the difficulty of maintaining supplies in Australia, and that adequate stocks were now available of many drugs which at times during the past few years had been in short supply. New pharmaceutical preparations of "Neomonacrin", the methyl derivative of "Monacrin", were displayed—"Neomonacrin Cream", an antiseptic dressing made with a greaseless base, "Neomonacrin Emulsion", a fine oil-in-water emulsion prepared with maize oil, and "Neomonacrin Pessaries". In the section dealing with "Zephiran", the recommended dilutions were set out on a chart, and the system of sterile storage of instruments with "Zephiran" (1:2000) plus "Anti-Rust" was practically demonstrated. A large carboy showed the great volume of antiseptic made from a small measure of "Zephiran" concentrate.

THE STANFORD X-RAY COMPANY PROPRIETARY, LIMITED, through their Western Australian representative, S. Van Dal and Company, provided a display of X-ray and electro-medical equipment. The X-ray equipment included the "85/30" mobile X-ray generator, capable of delivering 85 kilovolts at 30 milliamperes, a vertical Bucky stand equipped with a Liebel Flarshelm Bucky (17 inches by 17 inches) and all accessories, a wall-mounted cassette holder designed to take any size cassette, "L.F." stationary focused filter grids, and the new book type "Stanford" cassette. Included with the therapeutic equipment were the "Stanford" portable ultra-violet lamp with its special quartz low-pressure mercury arc burner, and both the table and standard model infra-red lamps with their non-luminous type burners housed in parabolic reflectors. In the electro-surgical line, the chief features of the compact "Stanford" heavy duty cautery units were their precision, their finish, and the ease with which the burners could be rotated in the pistol-type cautery handle.

W. RAMSAY (SURGICAL) PROPRIETARY, LIMITED, through their Western Australian representatives, S. Van Dal and Company, exhibited a selected range of medical, surgical and dental text-books, which included such well-known

titles as the following: McLachlan, "Venereal Diseases"; Whitby and Britton, "Diseases of the Blood"; Parsons, "Diseases of the Eye"; Hall, "Psychiatric Examination of the School Child"; Hamilton and Johnson, "Industrial Toxicology"; Cameron, "Recent Advances in Endocrinology"; Schaeffer, "Pediatric Gynecology"; Turner, "Diseases of the Esophagus"; Lambie and Armytage, "Diagnostic Methods". Among the optical exhibits, the "Beck" research microscope with its vernier mechanical stage and calibrated focus adjustments, and the "Gowlands" diagnostic set, were of particular interest. The following instruments were included: "Shambaugh" irrigation and suction forceps; "Adson" laminectomy retractor; "Dahlgren" gouge forceps (2 blades); Lempert's endaural speculum; "Shadwell" laryngoscope with lamp; Priddy's nerve hook; "Friedrich" rib-suturing forceps; "Collier" antrum punch; nippers for head of malleus; "Henckel" upward cut ethmoid forceps; Bart's ethmoid forceps; "Wishart" guillotine forceps; "Cawthorne" bone nibbling forceps; "Traquair" punch; and a six-bladed bladder retractor.

THE COMMONWEALTH INDUSTRIAL GASES, LIMITED, Alexandria, New South Wales, were represented by the medical section of their subsidiary, Commonwealth Industrial Gases (Western Australia) Proprietary, Limited. Members of the medical profession were afforded an opportunity of viewing some contributions by the exhibitors to the field of nitrous oxide and oxygen anaesthesia and oxygen therapy. Foremost amongst the pieces of apparatus displayed was a specimen of the new "C.I.G." canister circle absorber. Interest was shown in the oxygen bassinets for premature babies. By means of this latest addition by "C.I.G." to the field of oxygen therapy, the infant can be placed in an oxygen-enriched atmosphere without inconvenience to normal nursing procedures. Equipment for the administration of carbon dioxide therapy by "Sparklets" (London), nitrous oxide and oxygen apparatus produced by the British Oxygen Company (London), and equipment for the treatment of asthmatic conditions with the "Collison" inhaler were also included.

JOHNSON AND JOHNSON PROPRIETARY, LIMITED, showed a variety of standardized machine-made surgical dressings, and all modern types of sutures and suture material. Tantalum, the versatile new metal for surgical procedures, was shown in plates, screws, clips and wire of all gauges. The latest edition of "Operative Procedure", published by the "Ethicon" Suture Division of Johnson and Johnson, was also on view.

NICHOLAS PROPRIETARY, LIMITED (ETHICAL DIVISION), had arranged a display of "Salacrin", a new antibacterial compound, to show its principal features; the display consisted of a series of laboratory demonstrations. The display was designed to show that "Salacrin" had wide antibacterial activity, was non-staining, was compatible with normal saline solution and penicillin, and was stable; the mode of action was also indicated. Other Nicholas products were also shown and described. The latest addition to the Nicholas range of vitamin preparations was introduced to the medical profession at the display—"Intravite B Group", a preparation of the principal B group vitamins for parenteral administration.

F. H. FAULDING AND COMPANY, LIMITED, exhibited several of their products. The first was "Hypette Nabita" (sodium bismuthyltartrate injection) for the treatment of infective arthritis. "Hypette Nabita" was stated to parallel the action of gold injections, whilst being free from toxicity. The recommended mode of administration was as follows: one cubic centimetre was injected deeply into the gluteal muscle at intervals of a fortnight for three injections, and the interval was then extended to three, four and six weeks. Another product shown was an oily injection of penicillin packed in a collapsible tube with a special adapter. The tube was stated to contain five cubic centimetres, each cubic centimetre being equal to 300,000 units; the suspension was fluid at room temperature and was easily injected through a 20-gauge needle. The product was said to be convenient to use and of reasonable price. "Pentone" (pentobarbital sodium, 1.5 grains) was also

on display; it was said to be a hypnotic and sedative for pre-anæsthetic medication, for obstetrics and for insomnia.

CIBA, LIMITED, Basle, Switzerland, displayed a full and interesting range of their products, special prominence being given to Ciba's new forms of hormone administration—"Crystules" and "Linguets". "Crystules" are ampoules containing two cubic centimetres of a buffered isotonic aqueous suspension of pure hormone crystals of optimum size, and are for prolonged action over a period of approximately three weeks. "Linguets" are for sublingual administration, and are directly absorbed through buccal mucosa; they were said to be more effective and quicker in action than tablet medication. All "Ciba" hormones were said to be available in the form of implant tablets, which are inserted in the subcutaneous tissue; the object is to ensure that a constant but limited amount of the active principle of the implant passes continuously into the blood stream. "Antikistine", a product for the control of allergy in use both in Australia and overseas, was also shown; it was stated to be a synthetic antihistaminic for systemic treatment, and suitable for oral, intramuscular and intravenous administration. For the local treatment of hay fever and other allergic affections of mucous membranes, "Antihistine-Privine", an antihistaminic with vasoconstrictor, was demonstrated. Prominence was also given to the new combinations of "Coramine" ("Coramine-Adenosine", "Coramine-Ephedrine", "Coramine-Caffeine" and "Coramine-Glucose"), to "Priscol" (a vasodilator of peripheral vessels with special indications in ophthalmology), to "Nupercaine" spinal anaesthetic (heavy and light types), and to the two antispasmodics "Trasentin" and "Neuro-Trasentin", the latter containing added phenobarbitone.

PARKE, DAVIS AND COMPANY included in their exhibit many of the new products developed by their research department. "Benadryl", now well known in Australia, is an anti-histaminic drug used in the treatment of allergies; it was shown in both "Kapsal" and elixir form, the latter being particularly useful for administration to children. "Oxycel", an oxidized cellulose haemostatic which was stated to be readily absorbed from the body tissues, was shown in forms resembling cotton gauze and cotton wool and packed in sealed sterile vials. "Abdee Drops", the latest vitamin product of Parke, Davis and Company, was said to be a solution of the fat-soluble vitamins A and D with the water-soluble vitamins C and B complex factors, all in a water-miscible base. It was stated that the product had created much interest in paediatric circles since it had been shown that vitamin A was more readily absorbed from an aqueous medium than from the more familiar fish oils. "Pitressin Tannate in Oil" was also shown; the "retarding" effect of the salt was said to make frequent injection unnecessary for prolonged anti-diuretic effect. Other preparations included in the exhibit were "Dilantin", folic acid tablets, "Taka-Combex Kapsals", "Thrombin Topical", "Nutritive Capsules", "Antultrin-S" and glutamic acid tablets, as well as older and more widely known products.

WATSON VICTOR LIMITED arranged a display covering a wide range of surgical and scientific instruments, as well as examples of the X-ray apparatus which they manufacture. The surgical instrument section included specialized instruments made by American Cystoscope Makers, Inc., and a wide range of high-grade surgical instruments in stainless steel by leading makers. From their wide range of scientific equipment the exhibitors showed some microscopes by W. Watson and Sons, England, and two types of absorptiometer bearing the name of "Hilger". Centrifuges and various accessory devices for laboratory work were shown, as well as an item of particular interest in public health and industrial application—the "Konimeter" for rapid standardized atmospheric dust counts. It was not possible in the space available to display the whole range of the WatVic X-Ray Apparatus. The shockproof mobile "SF-2" and a vertical fluoroscope for the physician's rooms were on view to represent that side of the exhibitors' activities. The centre piece of the display was an electro-surgical machine of pleasing design and adequate power for all applications. The unit, which

is manufactured in the company's Australian factory, was said to incorporate both vacuum tube and spark gap circuits, and to be provided with a wide range of fine control over both cutting and coagulating currents and means for selecting either type of power or a blend of both from the footswitch.

FELTON, GRIMWADE AND BICKFORD's exhibit included a number of additions to the "D-H-A" range of medical products. The drug teroperin, which was stated to have given promise of having some value in the management of malignant disease, was introduced for the first time into Australia. A method of injecting penicillin-oil-wax mixtures ("Transjector" pack, D-H-A) without transferring the mixture to a syringe was demonstrated. This is done by means of a "Transjector" holder (patent applied for). Tablets of the mixed alkaloids of belladonna for the treatment of Parkinsonism were displayed under the name of "Dhasolan"; the strength was said to permit the gradual decrease or increase of dosage. The fatty acid treatment of tinea by means of undecylenic acid and zinc undecylenate was featured in the form of "Dermecyl" ointment and powder. "Rutin" (D-H-A) is produced wholly in Australia and is available in tablets of 20 and 50 milligrammes. Interest was shown in a liver extract, "Hepadyn", said to be pleasantly flavoured, and in the arrangements of "Soluvac" apparatus for the intravenous administration of fluids.

OXYGENAIRE (AUSTRALIA) PROPRIETARY, LIMITED, in association with OXYGENAIRE (LONDON), LIMITED, designers and manufacturers of oxygen tents and auxiliary equipment, displayed for the inspection of the Australian medical profession newly imported British oxygen therapy equipment, including the Wigmore oxygen tent, the Queen Charlotte tent for infants up to nine weeks old, and the "Oxyair" lightweight plastic oxygen mask. The "Oxycillin" oxygen-penicillin atomizer, which was said to present a new and improved method of administering oxygen and penicillin in aerosol form, attracted interest. It was stated that all equipment had been produced by Oxygenaire, Limited, following clinical research and collaboration with specialists and hospitals in England, and was now available in Australia through the sole distributors, Oxygenaire (Australia) Proprietary, Limited, of Sydney, and their appointed agents in other States.

BERLEI, LIMITED, in the space allotted to them had set up a system of screens, arranged to form a continuous display space. On the screens were placed photographs of figures wearing Camp Berlei supports with reading matter under the photographs. The display was arranged to be read at a distance of two feet.

BURROUGHS WELLCOME AND COMPANY (AUSTRALIA), LIMITED, arranged an exhibit in which the following products were shown. "Sulphetrone" brand tetrasodium 4:4'-bis-(γ -phenyl-propylamino)-diphenylsulphone- α : γ : α : γ -tetrasulphonate, a derivative of diamino-diphenylsulphone, was evolved in the Wellcome Research Laboratories. It was said to have given satisfactory results in the treatment of leprosy of the nodular or lepromatous type. The statement was made that recently published papers indicated its value in the treatment of the early infiltrative type of pulmonary tuberculosis. "Physeptone" brand *dl*-2-dimethylamino-4:4'-diphenylheptane-5-one hydrochloride was said to be an analgesic of value in the control of severe pain. "Tubarine" brand injection of *d*-tubocurarine chloride was also shown; it was said to be an effective curarizing agent of constant activity for use in surgery and as an adjunct to convulsion therapy. Other products shown were "Wellcome" globin insulin with zinc, "Digoxin", "Wellcome" ergometrine, "Tabloid" cyclobarbitone, "Methedrine" brand injection of *d*-N-methylamphetamine hydrochloride, and "Tabloid" penicillin (calcium salt).

GLAXO LABORATORIES (AUSTRALIA) PROPRIETARY, LIMITED, had a stand on which were displayed a number of their products. The vitamin specialties, from "Adexolin" to "Permidin", comprised vitamins A, B, C, D, E, K and P, and nicotinic acid. In the central display window was an exact replica in glass of the mould *penicillium notatum* magnified 8000 times and coloured. Penicillin "Glaxo",

both yellow and crystalline, was also shown. The stand was so designed that several other windows were "dressed" from day to day with the products appropriate to the papers being read. Included in this display were anaesthetic agents, X-ray media, antiseptics, liver extracts, dextrose, vaccines, and infants' and invalids' foods. A technical folder prepared for the occasion was distributed to the members of the medical profession viewing the exhibit.

Reviews.

ENDOCRINOLOGY AS A CLINICAL STUDY.

IN "Clinical Endocrinology and Constitutional Medicine" A. P. Cawadias has presented endocrinology as a clinical study.¹ A general description of the physiology and pathology of the neuro-endocrine system and a brief account of the historical development of this branch of medicine present an excellent introduction to the study of diseases of endocrine origin. The importance of the hypothalamus and pituitary gland as the controlling mechanisms is adequately discussed in relation to groupings of disorders in systems comprising (a) the thyroid, parathyroid and thymus; (b) the gonads and adrenals; (c) the pituitary and pineal; (d) the pancreato-hepatic hormonal group.

When, however, diseases of the various groups are described and therapeutic measures are discussed there is a rather irritating repetition of the method of presenting each disorder, which, although of advantage if the disorders are referred to separately, is detrimental to sustained interest. Perpetuation of the subdivision of toxic goitre into exophthalmic goitre and toxic adenomata as distinct disease entities does not assist in an understanding of disorders of the thyroid gland with toxic manifestations, and disregards the essential underlying unity of these conditions. The subdivision of disorders of other endocrine systems also appears to be excessive and too independent of physiological considerations.

The advice on therapeutics contains so much empiricism of debatable value, including homeopathy, that this detracts from measures of proven worth. Rational therapeutics is desired.

Neologisms which are prolific throughout the work are not only annoying but entirely unnecessary, and detract from a useful presentation which stresses the importance of studying individuals affected by disease, the integration of neural and hormonal mechanisms in disorders of endocrine glands, and the application of hormone therapy.

HUMAN ORIGINS.

IN the two essays contained within his latest book, "Hallmarks of Mankind",² Professor Wood Jones reviews briefly the evidence he has advanced previously in such works as "Arboreal Man", "Man's Place Among the Mammals" *et cetera* in support of his contention that man arose from some pre-primate stock and not from any representatives of lemurs, monkeys or apes as we know them today. He touches lightly upon his adherence to the Lamarckian thesis of inheritance of acquired characteristics which he expounds more fully in his recent "Habit and Heritage". In the first of the essays the author surveys the changing views upon man's ancestry since the days of Darwin, and in both he discusses some aspects of the comparative morphology of regions he considers crucial for his argument. As always, he writes clearly, attractively and persuasively, but in a rather more polemical mood than usual. His clarity of style might very well serve as a model for most modern writers on scientific subjects; but when it comes to analysis of his statements some doubts inevitably arise. In the first place, we feel that he is unfair to Huxley, who was far from being an uncritical adherent of Darwin; and secondly, we cannot share the scorn he expresses for the

¹ "Clinical Endocrinology and Constitutional Medicine", by A. P. Cawadias, O.B.E., M.D., F.R.C.P.; 1947. London: Frederick Muller, Limited. 9½" x 6½", pp. 380, with illustrations. Price: 42s.

² "Hallmarks of Mankind", by Frederic Wood Jones, D.Sc., M.B., B.S., F.R.S., F.R.C.S.; 1948. London: Baillière, Tindall and Cox. 8½" x 5½", pp. 96, with many illustrations. Price: 10s. 6d.

changing views of subsequent schools of thought on human evolution—surely the ability to revise an opinion in the light of new evidence is the proper mark of the scientist. In arraying his evidence, Wood Jones employs the usual morphological arguments, and in one respect, anyway, would not arouse much opposition among British anatomists, namely, when he contends that the structure of the human forelimbs and hindlimbs precludes the possibility of any prolonged arboreal apprenticeship. This point to which, as far as we are aware, Wood Jones was the first to draw attention might almost be considered too orthodox today to warrant extended discussion. But now, and for the first time, the author goes beyond this and asserts that there is no real necessity for any arboreal phase at all to produce an upright posture. This may very well be so, but the comparison drawn—with the bear—is not particularly well chosen, for the facts of morphology scarcely ally the bear with any recognizable stage in human ancestry. Moreover, while the thesis that the pre-human, like the bear, could have adopted the orthograde posture spontaneously may be valid, it gives no explanation for other and more profound developments such as reduction in the importance of smell and enhancement of vision—particularly binocular vision. On the other hand, postulation of some arboreal phase in pre-human existence does supply an intelligible reason for these changes.

So far we have considered this book in the spirit in which it was written—which is essentially the spirit in which Huxley or Mivart would have written it. This, we feel, is the saddest part about it: the whole of the argument belongs to the past. Nowhere do we find any concession to modern biological work. Genetics, with all its potentialities in variation and mutation, is completely ignored; so, too, with problems of growth—both isometric and allometric, with growth gradients and differentiation and, more particularly, with the vast prospect opened up by the discovery of neoteny and allied embryological processes. Fuller appreciation of the importance of some of these factors would have eliminated the constant appeal to purely morphological features. We feel that proper appraisal of the book demands these criticisms; nevertheless, we enjoyed its stimulating and provocative outlook and feel confident that any thinking reader will extract an equal amount of pleasure.

HANDBOOK OF PRACTICAL BACTERIOLOGY.

THAT ever-present help in time of trouble to the harassed laboratory worker, Mackie and McCartney's "Handbook of Practical Bacteriology", now appears in its eighth edition, having attained this warrant of consistent efficiency in the space of twenty-three years since its publication as a small volume entitled "An Introduction to Practical Bacteriology" in 1925.¹

The eighth edition is a book approaching text-book dimensions, but still a manual of convenient size, preserving the format of previous editions. Part I consists of lucid and concise chapters dealing with the biology and metabolism of microorganisms, and immunity in relation to practical bacteriology. Included in this division of the book are necessarily brief but none the less clear discussions of chemotherapy and antibiosis. The techniques of sulphamide and penicillin assay of serum, in order to maintain a check on the concentration of the bacteriostatic or antibiotic agent in the blood of a patient under treatment, are set out in a manner which eliminates all difficulty for a technician of average competence.

It is from Part II, however, that the book gains its distinctive character as an eminently practical guide unlikely to fail in circumventing any situation presenting a problem in bacteriological technique. Of particular value are the detailed formulae and instructions relating to the preparation of a comprehensive range of up-to-date culture media. A section that might be read with advantage by practitioners of medicine generally, including resident medical officers in public hospitals, is that dealing with the proper collection and transmission of specimens to the laboratory, where the workers frequently suffer needless vexation from ignorance or carelessness in this important matter.

Part III is devoted to description of pathogenic and commonly occurring commensal microorganisms, filterable viruses, and the bacteriological diagnosis of specific infective processes. It is somewhat surprising to find, at page 375,

¹ "Handbook of Practical Bacteriology: A Guide to Bacteriological Laboratory Work", by T. J. Mackie, C.B.E., M.D., LL.D., D.P.H., and J. E. McCartney, M.D., D.Sc.; Eighth Edition; 1948. Edinburgh: E. and S. Livingstone, Limited. 8½" x 6½", pp. 632, with some illustrations. Price: 25s. net.

the statement with respect to tuberculous infection, that "in general, *direct microscopic examination* serves for ordinary diagnostic work". The limitations of the Ziehl-Neelsen preparation are not sufficiently emphasized and the necessity and technique for the application of cultural methods in the routine laboratory diagnosis of tuberculosis are given inadequate consideration.

It says much for the merit of the book that criticism must be diverted to its phrasing, but the intrusion of the clinical dialect, as exemplified in the expression "negative reaction", is a feature the elimination of which would improve the literary quality of the work. Subjects of the tuberculin test, human or bovine, either react or fail to react; in the latter event the non-existent reaction does not admit of qualification by the word "negative" or any other adjective.

For those who might regard such comment as captious and pedantic, let it be said, as was said by this journal of a former edition, that the laboratory which does not possess an up-to-date copy of "Mackie and McCartney" lacks an essential item of equipment.

STAMMERING.

MR. H. C. LONDON BELL in his brochure "Stammering: Can It Be Cured?", shows that he has made, over many years, a careful and intelligent investigation of this distressing disability.¹ He sets out a brief, clear outline of the function of speech and the nature of stammering.

He quotes the opinions of several renowned authorities on the cause and effect and methods of treatment, but in the main he disagrees with the therapeutics they recommend. He himself suffered from a stammer, which he claims to have cured. The treatment which he advocates as successful in his own case consists chiefly of the building-up of a habit of slow, deliberate speech, with emphasis on and pause after each word, thus: "My—name—is—Brown." Then, after extensive and careful practice, the words are grouped into phrases, each phrase being spoken as a word: "MynamelsBrown."

Actually, this method is nothing more than the development of a rhythmic pattern of speech, which is a basic principle of treatment and one recommended by most authorities. What the author appears to overlook is that no two stammerers are alike, and whilst his own views as a sufferer are of interest, it must be remembered that speech therapists are devoting much of their time trying various methods of treatment, as totally different therapy is required in different cases.

Every speech therapist admits that while he has his successes he also has his failures, and it is the failures which constitute a challenge to further exploration in the remedial field. Nevertheless, Mr. Bell has presented some interesting reading, particularly for the stammerer and the layman interested in stammering.

THE METABOLIC BRAIN DISEASES AND THEIR TREATMENT.

IN "The Metabolic Brain Diseases and their Treatment" G. Tayleur Stockings attempts to show that the schizophrenic, affective and delusional psychoses are "primarily due to a metabolic disorder of the cerebral biochemistry".² He terms these reactions encephalopathies and suggests that they can be classified in two groups. The first or dysoxic group is due to a "disorder of the oxidation processes of the cerebral tissue", and this group responds to convulsant or shock treatment. The second or dysglycic group is due to a "disorder involving the glycolysing processes of the brain tissues" and responds to insulin treatment.

The book commences with an outline of the normal cerebral metabolic processes. This is followed by a classification and a description of the two main types of encephalopathies and their various subgroupings. The symptoms are described in detail. The differentiation of the encephalopathies from organic and neurotic conditions is discussed. The methods of giving shock and insulin treatment are

¹ "Stammering: Can It Be Cured?", by H. C. London Bell, with a foreword by Professor A. N. Burkitt, M.B., B.Sc.; 1948. Sydney: Angus and Robertson, Limited. 8½" x 5½", pp. 36.

² "The Metabolic Brain Diseases and their Treatment in Military and Civilian Practice", by G. Tayleur Stockings, M.B., B.S., D.P.M.; 1947. London: Baillière, Tindall and Cox. 8½" x 5½", pp. 270. Price: 16s.

outlined and the final chapter is concerned with psycho-surgery.

The author suggests that this book should provide a basis for discussion by psychiatrists and physicians interested in these conditions. It is doubtful whether it would be useful for the following reasons. The case histories quoted in the text are mostly acute conditions met in military service and these form only a limited group of civilian practice, particularly for the general physician. Secondly, the author introduces a terminology of his own, based on his conception of these disorders. Few psychiatrists would agree that the response of these psychoses to treatment is so satisfactory that they can be classified according to whether they respond to the shock treatment or to insulin treatment. There would also seem little support for his statement that the effect of convulsant treatment is due to the anoxæmia associated with its reaction.

The clinical descriptions of the two main groups and of their subgroups are not clearly differentiated and would confuse many readers.

The book is really an unbalanced over-elaboration of a thesis suggesting that certain psychiatric conditions are due to a metabolic disturbance in the brain.

SEXUAL BEHAVIOUR IN THE HUMAN MALE.

"SEXUAL BEHAVIOUR IN THE HUMAN MALE", by Alfred C. Kinsey *et alii*, is presented by the publishers as "an objective factual study of sexual behaviour" of about 12,000 males resident in the United States of America and in particular those resident in the north-eastern quarter of that country.¹ The data in the study were secured through first-hand interviews, and, in order to test constancy of memory, "retakes" were made of whole histories of 162 persons. The incidence data were most consistent and the difference between the means calculated for the original histories and the means calculated for the retakes was less than 2.4% in most cases. It is claimed therefore that the incidence figures throughout the book "may be accepted as very reliable".

A major part of the book is concerned with incidence figures and with average frequencies of various types of sexual activity. The volume is divided into three parts: first, "History and Methods", then "Factors Affecting Sexual Outlet", and, finally, "Sources of Sexual Outlet". There is an appendix on sample size giving eight tables presenting statistics on each of the sample populations and a bibliography extending to twenty-two pages.

The study resulting in this publication has been under way during the past nine years and the aim has been "an attempt to accumulate an objectively determined body of fact about sex which strictly avoids social or moral interpretations". All kinds of persons and all aspects of human sexual behaviour are included in the survey. It has been found that there is no American pattern of sexual behaviour, but scores of patterns each of which is confined to a particular segment of society.

It is claimed that "in the total male population, single and married, between adolescence and old age, 24 per cent. of the total outlet is derived from solitary sources (masturbation and nocturnal emissions), 69.4 per cent. is derived from heterosexual sources (petting and coitus) and 6.3 per cent. of the total number of orgasms is derived from homosexual contacts. It is not more than 0.3 per cent. of the outlet which is derived from relations with animals of other species".

Fifty-six pages are devoted to consideration of data dealing with homosexual outlet and "the opinion that homosexual activity in itself provides evidence of a psychopathic personality is materially challenged by these incidence and frequency data". The data indicate that more than a third (37%) of white males in any population have had at least some homosexual experience and "there is an increasing population of the most skilled psychiatrists who make no attempt to re-direct behaviour, but who devote their attention to helping an individual accept himself and to conduct himself in such a manner that he does not come into open conflict with society".

It is said that "social attitudes are acquired long before the child may know that there is any significance to genital stimulation, much less to intercourse. The so-called sex instruction which is given by parents and schools usually consists of a certain amount of information concerning the

anatomy and mechanics of reproduction. As far as our present information goes this has a minimum of any effect upon the development of patterns of sexual behaviour and indeed it may have no effect at all. Exceedingly few males modify their attitudes on matters of sex or change their patterns of overt behaviour in any fundamental way after their middle teens".

About 57% of older boys and adults recall some pre-adolescent sex play, most of it occurring between the eighth and thirteenth years, and it is claimed that it is not improbable that nearly all boys have some pre-adolescent genital play with other boys or with girls. Between 92% and 97% of all males are said to have had some masturbatory experiences, and this is the chief source of premarital sexual outlets for the upper educational levels.

In regard to premarital intercourse there are striking differences between educational levels in relation to sexual outlet with prostitutes. Among males who were unmarried at the age of twenty-five years it was found that 74% of the grade school level, 54% of the high school group and 28% of the college level had had intercourse with prostitutes. With advancing age, in unmarried males, the percentage rises in all educational levels.

It was found difficult to secure anything like adequate data concerning extra-marital intercourse, but, "allowing for the cover-up that has been involved, it is probably safe to suggest that about half of all the married males have intercourse with women other than their wives at some time while they are married". Prostitutes are said to supply between 8% and 15% of all extramarital intercourse.

It is claimed, concerning the stability of sexual patterns, that the changes that have occurred in the past twenty-two years concern only attitudes and minor details of behaviour. Nothing that is deeply fundamental in overt activity has changed, for many of these were settled in the religious philosophy of the Old Testament and even among more ancient peoples.

The book, though coldly factual, is disturbing. The conditions disclosed are not unique to the United States of America, for they are to be found in varying degrees in other nations. What is of grave importance is the fact that a dominant world power appears to have so great a problem in regard to the sexual outlet of its people.

For us in Australia the future, presumably, holds change such as that which came to America in past years. New people from old lands will come in increasing numbers with differing patterns of behaviour to be woven into a new national fabric. It is difficult to believe that the coming together of so many kinds of people into a new land would not have a marked effect on the stability of sexual patterns already existing there, for good or for ill. Perhaps with knowledge of what has happened, and is still happening, elsewhere, we may avoid or lessen some of the problems of sexual behaviour which have been made evident in this volume.

This book, if we presume that the major part of the data is valid, is a valuable contribution to its particular field, and should be read by all concerned with the direction of human behaviour, for it is primarily intended for them.

A TEXT-BOOK FOR MIDWIVES.

"TEXTBOOK FOR MIDWIVES", by Wilfred Shaw, is a new publication designed to fill the gap between the book used by midwifery nurses during their course and that for medical students.¹ It is intended for those nurses who have a real and intelligent interest in midwifery and wish to extend their knowledge. The midwife performs one of the most vital duties in modern society and the author aims at raising her professional status. Considerable attention is given to the phrasing throughout the book. Explanation of the reasons for procedures whether in examination or treatment is emphasized. The glossary contains words other than those of a purely medical significance, and should prove helpful to those who have not had the advantage of higher education. The book is a model to be followed in all classes of text-book as regards the setting out of the subject matter. Each chapter is headed by a list of contents in heavy type, and each heading appears again above its appropriate paragraph, thus facilitating reference. Those paragraphs which deal with anatomy and physiology are printed in smaller type. While there may not be anything strikingly

¹ "Sexual Behaviour in the Human Male", by Alfred C. Kinsey, Wardell B. Pomeroy and Clyde E. Martin; 1948. Philadelphia and London: W. B. Saunders Company. 9½" x 6", pp. 820. Price: 46s.

¹ "Textbook for Midwives", by Wilfred Shaw, M.A., M.D. (Cantab.), F.R.C.S. (England), F.R.C.O.G.; 1948. London: J. and A. Churchill, Limited 7½" x 5", pp. 698, with illustrations. Price: 12s. 6d.

new in the art of midwifery, the subject is presented in very concise and understandable terms. The detailed instructions as to immediate action to be taken by the midwife when confronted with various emergencies, such as hæmorrhage in *placenta prævia*, are excellent, as also are the instructions both in action and in refraining from action in the normal and in the abnormal. A very interesting comparison of the advantages of delivery in the lateral and the dorsal positions is included. The author's remarks on the subject of episiotomy are very apt. The use of penicillin and the sulphonamides is adequately dealt with. In view of the demands made upon midwives for analgesia and anaesthesia in labour, one would prefer that more space should have been devoted to explaining the best ways of using such drugs as the barbiturates and pethidine, and one is in disagreement with the author's remarks on chloroform, and especially its use in eclamptic states and the toxæmias of pregnancy. The chapter on the pre-natal examination of the patient explains all procedures which may be applied, including the biological tests for pregnancy and the scope of X-ray examination of the fetus and the female pelvis; moreover, the limitations inseparable from the human element in examination are noted. The author is to be congratulated on the clarity of the diagrams throughout and his courage in including a chapter on the composition of the body tissues, in which he briefly and clearly explains much of the difficult subject of biochemistry. This book is very comprehensive, and there is no problem likely to confront a midwife upon which it does not throw light. It should certainly be in the hands of every teacher of midwifery, whether of the medical or of the nursing staff; and it should be available to the pupil nurses of every training school for reference.

ESSAYS ON PSYCHOLOGY.

"OXFORD ESSAYS ON PSYCHOLOGY" by William Brown consists of a series of short lectures which were delivered to lay students during the period 1944-1946. The author is a well-known figure in British psychiatry and he has now been practising his specialty for thirty years. He has an extensive knowledge of classical lore, philosophy and psychology, and his presentation borrows richly from all these sources, so that his writing is not only capable but most entertaining. Moreover, he adds to all of this a personal experience of conditions in Germany prior to the outbreak of war, and in his analysis of group psychology he has much light to shed on the psychopathology of the German nation.

Commencing with a simple description of individual psychological principles, he leads the reader on to the psychology of the group. The next lecture is devoted to the paranoid tendency; he points out its existence in the Nazi leaders and finally demonstrates the mechanisms by which it was aroused in the mass of the German people. After a description of social psychology, he has a chapter on "Psychology of Freedom in a Planned Society" in which his main emphasis is on philosophical developments. The final two chapters are concerned with the relationship between psychology and medicine, and with therapeutic methods.

The volume has the limitations of a book of its small size in that partial truths are presented as facts; for instance, no responsible neuropsychiatrist could simplify the function of memory so that loss of memory for recent events could be ascribed to a "degeneration of the tangential fibres of the cerebral cortex". In the main, the author adopts eclectic attitudes and avoids controversy, but his very superficial analyses, which might satisfy the layman, would not be acceptable to anybody with more than a passing knowledge of psychopathology. The section on therapy is badly balanced with over-emphasis on suggestion and relaxation therapy; in relation to these, there is an interesting account of Yoga practice. Finally, hormic psychology receives too much attention, and psychodynamic interpretations receive far too little.

However, the material is suitable for those who are looking for a simple and lucidly interpreted glance at the extensive fields of psychology and psychopathology. It can be regarded as nothing more nor less than this, and, with this proviso, may be recommended to the intelligent layman, nurses, students and medical practitioners.

¹"Oxford Essays on Psychology", by William Brown, D.M. (Oxon.), D.Sc. (London), F.R.C.P.; 1948. London: William Heinemann (Medical Books), Limited. 7½" x 5", pp. 156. Price: 10s. 6d.

Books Received.

[The mention of a book in this column does not imply that no review will appear in a subsequent issue.]

"Blood Derivatives and Substitutes: Preparation, Storage, Administration and Clinical Results including a Discussion of Shock, Etiology, Physiology, Pathology and Management", by Charles Stanley White, M.D., Sc.D., and Jacob Joseph Weinstein, B.S., M.D.; 1947. Baltimore: The Williams and Wilkins Company. London: Baillière, Tindall and Cox. 9" x 5½", pp. 504, with illustrations. Price: \$7.50.

A comprehensive study of plasma, plasma substitutes and by-products from a clinical standpoint with a section on shock.

"The Venereal Diseases: A Manual for Practitioners and Students", by James Marshall, M.D., B.S., M.R.C.S., L.R.C.P.; Second Edition; 1948. London: Macmillan and Company, Limited. 8½" x 5", pp. 386, with illustrations, some coloured. Price: 21s.

A book for practitioners and students (not for research venereologists).

"The Practice of Chiropody: A Textbook for the Student and Practitioner", by Keith Campbell Jones, with a foreword by Norman C. Lake, M.D., M.S., D.Sc., F.R.C.S.; 1948. Sydney and London: Angus and Robertson. 9½" x 6", pp. 287, with illustrations. Price: 42s.

The first Australian text-book on chiropody.

"Aids to Embryology", by J. S. Baxter, M.A., M.Sc., M.D., F.R.C.S.I.; Fourth Edition; 1948. London: Baillière, Tindall and Cox. 6½" x 3¼", pp. 190, with illustrations. Price: 5s.

Almost completely rewritten since the last edition in 1938.

"Failures in Psychiatric Treatment", edited by Paul H. Hoch, M.D.; 1948. New York: Grune and Stratton. 8½" x 5½", pp. 250, with illustrations. Price: \$4.50.

The proceedings of the thirty-seventh annual meeting of the American Psychopathological Association, held in 1947.

"A Pocket Medicine", by G. E. Beaumont, M.A., D.M. (Oxon.), F.R.C.P., D.P.H. (London); Second Edition; 1948. London: J. and A. Churchill, Limited. 7½" x 4½", pp. 218. Price: 9s.

Short clinical accounts, with the appropriate treatment, of the diseases described in the author's "Essentials of Medicine".

"Recent Advances in Obstetrics and Gynaecology", by Aleck W. Bourne, M.A., M.B., B.Ch. (Cambridge), F.R.C.S. (England), F.R.C.O.G., and Leslie H. Williams, M.D., M.S. (London), F.R.C.S. (England), F.R.C.O.G.; Seventh Edition; 1948. London: J. and A. Churchill, Limited. 8" x 5", pp. 336, with illustrations. Price: 21s.

Six new chapters have replaced six previous ones and all others are revised.

"Recent Advances in Anaesthesia and Analgesia" (Including Oxygen Therapy), by C. Langton Hewer, M.B., B.S. (London), M.R.C.P. (London), D.A. (England); Sixth Edition; 1948. London: J. and A. Churchill, Limited. 8½" x 5", pp. 390, with illustrations. Price: 21s.

Contains a new chapter on curare and similar drugs and fresh information on many subjects.

"A Short Practice of Midwifery for Nurses", by Henry Jellett, B.A., M.D. (Dublin University), F.R.C.P.I., and J. Bernard Dawson, K.B.E., M.D., B.S. (London), M.D. (Adelaide), F.R.C.S. (England), F.R.C.O.G., F.R.A.C.S.; Fourteenth Edition; 1948. London: J. and A. Churchill, Limited. 7" x 4½", pp. 474, with illustrations. Price: 12s. 6d.

A revised edition of a well-established text-book for nurses.

"The Stuff We're Made Of", by W. O. Kermack, M.A., D.Sc., LL.D., F.R.S., and P. Eggleton, D.Sc., F.R.S.E.; Second Edition; 1948. London: Edward Arnold and Company. 7½" x 4½", pp. 368, with illustrations. Price: 10s. 6d.

A biochemical survey of life.

"Acute Intestinal Obstruction", by Rodney Smith, M.S., F.R.C.S., with a chapter of Radiological Diagnosis by Eric Samuel, M.D., F.R.C.S., F.F.R., D.M.R.E., and a foreword by Rupert Vaughan Hudson, F.R.C.S.; 1948. London: Edward Arnold and Company. 8½" x 5", pp. 274, with illustrations. Price: 18s.

A book "by a general surgeon on an important branch of general surgery".

"Treatment by Diet", by Clifford J. Barborka, B.S., M.S., M.D., D.Sc., F.A.C.P.; Fifth Edition; 1948. Philadelphia, London and Montreal: J. B. Lippincott Company. Sydney: Angus and Robertson, Limited. 10" x 7", pp. 792, with illustrations, some of them coloured. Price: 75s.

Detailed information on the prescription of diets and the guidance of patients in the selection of food.

The Medical Journal of Australia

SATURDAY, OCTOBER 16, 1948.

All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given without abbreviation: initials of author, surname of author, full title of article, name of journal, volume, full date (month, day and year), number of the first page of the article. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

CHRONIC ILLNESS.

CHRONIC ILLNESS provides an increasing problem in most civilized communities. Medical progress and rising standards of living conditions prolong the lives of many who could not survive in the primitive community. Andrew C. Ivy has pointed out¹ that the life expectancy in the United States in 1900 was forty-nine years; in 1945 it was sixty-six years. However, he remarks that the added years are probably derived more from the control of infectious disease than from the control of degenerative disease. For this reason he urges that the emphasis of medical research which has been in the past (and rightly and effectively so) on the control of the acute diseases should be shifted to the chronic and degenerative diseases. There is a good deal to be said for this idea, especially when it is realized that on a conservative estimate about twenty-five million persons in the United States (more than one-sixth of the population) have a chronic disease; some seven million of these have appreciable disability from their illness, while one and a half million are invalids. These figures are taken from a statement on "Planning for the Chronically Ill" prepared by representatives of the American Hospital Association, the American Medical Association, the American Public Health Association and the American Public Welfare Association.² This report, which has been adopted as an official statement by the four associations concerned, merits careful study by all those interested in the management of the chronically ill, for though it is based on American circumstances, most of its findings are of fairly general application. The problem is sufficiently pertinent in Australia and it can scarcely be said that the answer has been found. For the year 1945-1946 nearly sixty-three thousand persons in Australia received the invalid pension at an approximate total cost to the Commonwealth Government of four million pounds. This, of course, concerns only a section of the chronically ill, and even for that section is far from being an adequate solution of the problem.

¹The Journal of the American Medical Association, April 3, 1948.

²American Journal of Public Health and The Nation's Health, October, 1947.

Comment might be made on the pathetic inadequacy of the individual pensions and on the rigid application of the means test which fairly effectively discourages those who are able to supplement their pensions in a small way; the cost to the public purse of a more liberal attitude in these matters would surely be offset by a real benefit to many who would be able to afford a more nearly adequate diet and to develop their earning capacity—an important rehabilitation stimulus from both the medical and social points of view. However, there are more fundamental issues raised by the American report which have a stronger claim on these columns. The basic approach to chronic disease, it is pointed out, must be preventive. Although natural aging processes are important in the production of chronic ill health they are by no means the only factor or the most significant factor. The report lists as the most important of chronic diseases heart disease, arteriosclerosis, high blood pressure, nervous and mental disease, arthritis, kidney disease, tuberculosis, cancer, diabetes and asthma; and despite our gross ignorance of the aetiology of many of these conditions, enough is known to make it clear that they frequently are or should be preventable. It is also illuminating to note that fully one-half of the chronically ill in America are below the age of forty-five years, and 16% of them are under the age of twenty-five years. Comprehensive Australian figures are not available, but in the limited group represented by the invalid pensioners the recorded ages of the 8186 persons to whom invalid pensions were granted during 1944-1945 varied from sixteen to ninety years, 40% being in the forty-five to fifty-nine years age group; as it is usual to grant an old-age pension (if applicable) rather than an invalid pension, it seems reasonable to presume that a substantial proportion of these new invalid pensioners were below forty-five years of age.

In the sphere of prevention much more can yet be done in the application of our present knowledge. The American report urges intensified health department programmes to control chronic communicable diseases such as tuberculosis, syphilis, hookworm and malaria; the relative importance of these particular diseases is not the same in Australia, but the principle is obvious, and it is to be hoped that recent interest in tuberculosis shown by Federal and State Governments will be developed and accompanied by adequate financial support and then extended to other diseases. A further suggestion of the report relates to accident prevention programmes in industry, on the farm and in the home—programmes which need to go on continuously and vigorously. Then there comes a wide range of general and social activities—child and school health programmes, nutrition, mental health and housing programmes—all receiving some attention at present in this country, but requiring constant development and support; extension of their application (which is primarily at present to children) to adolescents and adults requires much thought. The periodical medical examination of apparently well persons needs encouragement with the provision of facilities for an adequate examination; standards for such examinations may well develop from special programmes now being devised for the detection of tuberculosis and cancer. The next consideration is research, for, as has already been pointed out, progress in the understanding of the chronic diseases has not run parallel with the advances made in controlling acute

diseases. Perhaps a shift in the emphasis of research may be justified, but the report places special emphasis on the need for much greater scope and better coordination in research, which should not be confined to clinical and laboratory studies, but should include the administrative, social and psychological aspects.

Passing to the question of the medical care of the chronically ill, we find the emphasis still on prevention. Early diagnosis and treatment may play a great part in the control of chronic disease; cure may not be effected, but disability is often minimized. Important factors are the provision of adequate facilities for diagnosis and treatment, education of the public and attention to the social factors involved in rehabilitation and readjustment of the handicapped individual to community life. Certain important points are made in relation to plans for the provision of medical care: the care of the chronically ill should not be separated from general medical care; emphasis is placed on the coordination and integration of services so that the individual will receive the best type of care for his particular needs; facilities should be planned for the community as a whole and not for the indigent alone; considerable and continued financial expenditure is inevitable; most important of all, "the goal of medical care is to maintain and restore the chronically ill as independent and self-supporting members of the community". It is important that as far as possible the chronically ill should be cared for in their own homes, provided that there is ready access to diagnostic and specialist facilities. Practical needs in this regard, to which a great deal more attention might profitably be paid, include many more public health nurses and the provision of a housekeeper service. Hospital care, where required, provides a different type of problem. Hospital authorities have found their long-term patients a constant embarrassment and a hindrance in providing for the acutely ill patients. The report points out that as a rule the hospital for acute illnesses is the wrong place for the chronically ill patient; it provides care which is more expensive than he actually needs and is yet often unsuited to his requirements. The provision of separate accommodation is recommended, but this should not be divorced from teaching centres and general hospitals. In large cities where a specialized chronic disease hospital can be provided it should serve as the consultation centre for chronic disease in its medical service region. As a rule patients with chronic illness should be cared for in a unit of a general hospital especially designed to meet their needs, and these facilities should be open to all sections of the community. Patients not requiring active medical care who cannot or should not remain at home are best accommodated in a nursing home. The report indicates that the control of nursing homes and their abuses is as difficult and necessary in America as in this country and urges the need for licensing laws with in addition an intensive educational campaign for the improvement of the individual homes; a probationary period of six months during which the licensing authority provides educational assistance is recommended as an effective method of raising standards. It is considered that the minimum standards should require continued medical supervision, including complete medical examinations of patients prior to admission to the nursing home and follow-up examina-

tions at definite intervals, as well as visits by a doctor on a regular basis and on call. The standards should require a sufficient number of practical nurses and attendants, at least one full-time trained nurse in charge of nursing care, facilities for recreation and occupational therapy, a maximum of privacy and individual attention, and cheerful and homelike surroundings. Construction should meet adequate standards of safety and sanitation.

Attention is called in the report to the lack of facilities for convalescence and rehabilitation of the chronically ill: convalescence, for example, after an exacerbation of the chronic condition or an intercurrent acute illness; rehabilitation designed to lead the patient to the greatest practical degree of economic and social independence. Wartime experience of the rehabilitation of service personnel has brought great advances in this field and their application to the civil community is economically and socially sound, as is the right handling of this whole problem. The report concludes with a plea for coordinated and comprehensive planning which will not neglect any of the aspects mentioned and which will link up the various individuals, institutions and organizations concerned. It is mentioned that in some communities this coordination has been achieved through the establishment of central planning and coordinating bodies. Little comment is made on this system or its merits, but some such plan seems to be necessary provided that it does not become just another controlling body which feeds on regulations and hinders the initiative and enthusiasm of all under it. The problem of the chronically ill is not a new one, but it certainly needs new impetus and vision. It does not attract a great many practitioners, though they are very much aware of its existence. Little remains to be said about this subject that has not been said before, either with zeal or with weariness, but the time is ripe to be realistic about it. There are signs that the vexatious problem of diseases of the rheumatism type is being seriously attacked in England. Tuberculosis and cancer are receiving individual attention. But for the whole problem we need a new vision that will bring a new and well-founded hope to the depressingly large group of people who are, often quite unnecessarily, a burden to themselves, to their relatives, to their medical attendants and to the community.

Current Comment.

MORPHINE ADDICTION AND PREFRONTAL LOBOTOMY.

It has been pointed out by T. H. Mason and W. B. Hamby¹ that since the development of psychosurgery therapeutic results have been attained in two main fields, namely, in psychiatry and in the relief of intractable pain. The observation gives added interest to their report of a case of chronic pain for which large doses of morphine were being administered and which was relieved by prefrontal lobotomy with immediate cure of the morphine addiction. The patient, a male, aged thirty-nine years, had undergone laminectomy for a spinal epidural abscess in the lower thoracic region and had survived with spastic paraplegia, a sensory level reaching approximately to the nipple line, and sphincter difficulty. Six months later he

¹The Journal of the American Medical Association, April 17, 1948.

developed unbearable pains in parts of the anæsthetic area, which were controlled by morphine in increasing doses. Three years after operation he was receiving 42 grains of morphine sulphate daily. Prefrontal lobotomy was performed with satisfactory relief of pain. Morphine was withdrawn completely on the second day after operation with practically no appreciable withdrawal symptoms. Five months later the patient was receiving no opiates, was "rather comfortable" and was about to begin a course of paraplegic rehabilitation, toward which he had been refractory before operation. J. L. Poppen also has reported a case of relief of morphine addiction and intractable facial pain as a result of prefrontal lobotomy; but the most striking feature of Mason and Hamby's report is the absence of physical effects on the withdrawal of the morphine. It is at least consistent with the suggestion made by others that morphine withdrawal symptoms are largely psychic in origin.

PHARMACOPŒIAL NAMES AND APPROVED NAMES.

THE coining of a multiplicity of names for drugs is confusing and unnecessary, but it is a common practice. The desire of manufacturers to have their own products distinguished from others is understandable, but at the very least medical practitioners should be aware of the pharmacopœial identity of a drug prescribed, even though they use one of its more exotic names, and they should know its principal aliases. The General Medical Council has made a practical effort to meet the situation by issuing a list of Approved Names. In the British Pharmacopœia, 1948, a number of new names have been made official by their use as the titles of monographs. In addition, the names for certain other drugs, for which no official monographs are provided, have been published as Approved Names, the intention being that if any of the drugs is eventually described in the British Pharmacopœia, the Approved Name shall become its official title. There is no implication, however, that the substance will necessarily be included in the Pharmacopœia. These names have been brought together in a pamphlet, a copy of which is to be enclosed with every copy of the British Pharmacopœia, 1948; separate copies may be obtained, free of charge, from the Secretary, British Pharmacopœia Commission, 44, Hallam Street, London, W.1. In the list are given some of the other names under which the drug is known, but in most instances only the names under which the substances were originally introduced are included. Since the intention is to recognize non-proprietary names which may be used freely by manufacturers, and thus to avoid the difficulties which arise from the multiplication of names, the hope is expressed that the Approved Names will be generally adopted and used for prescribing. The introduction of further new names is deprecated, but the Commission strongly recommends to manufacturers that, at least, the label should bear the Approved Name in letters no less conspicuous than those in which the proprietary name is printed. We might add to these recommendations the suggestion that in scientific articles the Pharmacopœial name or the Approved Name is preferable to a proprietary name.

HYPERGLYCÆMIA FOLLOWING INTRACISTERNAL INJECTION OF ADRENALINE.

THE several effects of adrenaline have been explained as a preparation for vigorous if not actually violent muscular action—flight or fight. The throttling down of the blood supply to skin and viscera and the cardiac stimulation both giving the muscles a bigger supply of blood, the hyperglycæmia providing the muscles with more energy food and the bronchiolar dilatation favouring deeper breathing all fall into line with this conception. Adrenaline solution has been injected into almost every possible body cavity actual or potential, even into joints. Alfred Leimdörfer, of the College of Medicine, University of Illinois, has

drawn attention to the remarkable increase of blood sugar following injection of adrenaline into the *cisterna magna*.¹ This hyperglycæmia is rapid in onset, of great intensity and of long persistence. One curious feature of the response is the complete absence of any action on the systemic circulation—no cardiac quickening nor augmentation of force, no vasoconstriction, and hence no rise of arterial pressure. That the circulatory excitement caused by adrenaline is peripheral in action has been proved beyond the possibility of doubt. Slow absorption from the *cisterna magna* has been ruled out by the experimental fact that the adrenaline can be recovered from the *cisterna* almost unreduced in amount. Leimdörfer therefore postulates a local, that is, an intracranial action, and suggests that it may be the pituitary which is concerned. As was shown by Aschner in 1912, extirpation of the pituitary reduces the hyperglycæmia following subcutaneous injection of adrenaline.² Leimdörfer has also pointed out that other central actions of adrenaline have already been demonstrated; one of these is analgesic, an actual dulling of the centres for pain perception, so that the addition of adrenaline to "Novocain" in intrathecal administration has an adjuvant effect. Also subarachnoid injection in the dog induces sleep. Leimdörfer assumes that glucose is the special food for brain metabolism, instancing the vertigo, weakness and coma resulting from hypoglycæmia, say, by over-insulinization. He also mentions in the same connexion that adrenaline in small doses enhances the activity of acetylcholine, a substance of importance in neural metabolism.

CIRCULATORY REFLEXES FOLLOWING STIMULATION OF THE AURICULAR BRANCH OF THE VAGUS.

THAT the heart responds reflexly to stimuli applied to many parts of the periphery of the body has been known for a long time. Scheminzy having this in mind investigated the possibility of heart reflexes being evoked from the posterior wall of the external auditory meatus which is innervated by the auricular branch of the vagus.³ Mechanical, thermal and electrical stimuli were employed and the responses were recorded by a sphygmograph. In general a slowing of cardiac rate was obtained, but, to the surprise of the investigator, identical effects followed stimulation of those parts which are innervated by the great auricular nerve coming from the cervical plexus. Schröcksnadel, of Innsbruck, has recently applied himself to the kindred problem of reflex changes in systemic arterial blood pressure arising from stimulation of the auricular branch of the vagus.⁴ Twelve healthy young men from twenty to thirty years of age were used as the experimental persons. A continuous record of the systemic arterial blood pressure was taken by the Wagner method and respiratory movements were simultaneously registered by a pneumograph in order to determine if any changes in blood pressure arose from the physical conditions of breathing. The posterior wall of each external auditory meatus was stimulated mechanically by a probe or a tampon before and after atropinization. In every instance except one, in which a previous operation had damaged the nerve supply, there occurred, in the unatropinized subject a reflex slowing of the heart of about 12%, and a fall of blood pressure of on an average 7%. Stimulation of the right meatus gave a more pronounced effect than did stimulation of the left—as every physiologist knows the nerve fibres subserving the heart are unequally distributed in the two vagi. Stimulation of the adjoining skin innervated by the facial or cervical plexus was without effect, any contrary findings being attributable to psychic causes. In the atropinized subjects no fall of blood pressure was demonstrated and the author concludes that what fall occurs normally arises from cardiac slowing and not from peripheral vasodilatation.

¹ Wiener klinische Wochenschrift, June 18, 1948.

² Pflügers Archiv, Volume CXCVI, 1912, page 1.

³ Pflügers Archiv, Volume CXCVI, 1922, page 527.

⁴ Wiener Zeitschrift für innere Medizin, July, 1948.

Abstracts from Medical Literature.

BACTERIOLOGY AND IMMUNOLOGY.

Techniques in Detection of Subclinical Meningococcal Infections.

EMANUEL B. SCHOENBACH AND JOHN J. PHAIR (*The American Journal of Hygiene*, May, 1948) carried out an appraisal of the techniques employed for the detection of subclinical (inapparent) meningococcal infections. It was performed at an army camp and planned to test the selectivity of various media, the direct and indirect methods of inoculating plates, the effect of repeated cultures from an individual, the examination of a number of colonies, and the prevalence rates obtained from methods commonly in use for the identification of the meningococcus. The authors found that experienced workers produced comparable results with either of two media and whether they picked one or a number of colonies. The identification by type-specific sera was the most reliable. Delayed inoculation of plates with swabs which had been kept for a reasonable time in whole defibrinated horse blood did not adversely affect results. The data were, however, affected by repeated examination of the individual; this advantage was apparently due to correction of sampling errors at subsequent swabbing rather than to changes in the flora of the naso-pharynx, as the swabs were taken twelve hours apart. The analysis of serological types and antigenic patterns was not completely worked out. The authors believe that their survey should help any worker contemplating a field survey.

Antibiotic Studies on β Haemolytic Streptococci.

HORACE M. GEZON (*Proceedings of the Society for Experimental Biology and Medicine*, February, 1948) has presented reports of three antibiotic studies on β haemolytic streptococci. The first study attacked the problem of penicillin resistance acquired by group A organisms isolated from patients with upper respiratory disease who had not been treated with penicillin. After 60 transfers onto media containing insufficient penicillin to prevent growth, a tolerance of 17 times the original amount was the greatest developed amongst 203 strains tested, and many did not acquire resistance as high as this. Mouse tests showed that there had been a great loss of virulence for mice. In about half of the resistant strains the group antigen could no longer be demonstrated, and there were changes in colonial appearance and hemolysis from β to α or γ . Virulence could be restored by passage in normal mice. The second paper discusses the penicillin resistance of ten strains of group B organisms. Here the original resistance to penicillin was higher than in group A, and an increase up to sixtyfold was obtained, but unlike that of the A strains the penicillin resistance of these organisms was not lost on transfer to plain media. The penicillin-resistant strains had lost virulence for mice, and one of three "passed" strains regained its virulence. The

majority of cultures did not lose their group antigen, and transient changes in colonial appearance reverted to the original when they were grown on normal media free from penicillin. The third paper describes the same set of tests applied to group C organisms, five strains being examined. A moderate increase in resistance up to sixteenfold was developed. The resistance was kept after serial passage through mice, and mouse virulence was diminished. Three of the five strains lost the group antigen, and similar results were obtained in relation to colony form and hemolysis. The changes seen in loss of hemolytic effect and production of α or γ effect reverted to β effect when the organisms were returned to a penicillin-free medium.

Safety of Multiple Antigen Preparations.

V. K. VOLK (*The American Journal of Hygiene*, January, 1948) presents observations on the safety of multiple antigen preparations as a preliminary to evaluating their efficiency. Various combinations of diphtheria toxoid, tetanus toxoid, pertussis vaccine, typhoid-paratyphoid vaccine, scarlet fever toxin and streptococcus vaccine were used, two doses of 0.5 millilitre or 1.0 millilitre being the standard amounts adopted; the subjects were adults in State institutions, children in State institutions and, as a control, normal children living at home. Subcutaneous injection was used at the beginning, but as there were many local reactions, described as "antigenic cysts" (a sterile local collection of material often called "sterile abscess"), the intramuscular route was later found to be better and was adopted for the rest of the study. It was found that children displayed less severe reactions than adults, and that the severity increased with the number of injections—a group of children to whom a third injection was given behaved in the manner of adults. The antigens containing typhoid vaccine appeared to produce more marked reactions than other combinations. From the point of view of reactions only, the author believes that it is safe to combine several antigens in a single immunizing mixture, but parents should be warned of the range of reactions.

The Use of Mice in Experimental Chemotherapy of Tuberculosis.

GORDON W. RALEIGH AND GUY P. YOUNG (*The Journal of Infectious Diseases*, May-June, 1948) have contributed two papers on the use of mice in experimental chemotherapy of tuberculosis, the first reviewing the literature. Laboratory animals used in the early studies of the chronic disease were almost entirely guinea-pigs, and when chemical bacteriostatic agents needed to be tested, a sixty-day test appeared to be the minimum one in which any reliance could be placed on the results of treatment. The possibility of using mice and observing them for a shorter period brought the realization that little was known of the pathogenicity of tubercle bacilli for the mouse, the dosages, routes of infection and histopathological picture, so they set about such a study. The second paper is concerned with pathology and pathogenesis of tuberculosis produced by intravenous inoculation of 0.1 milligramme of organisms

into one of the tail veins. The standard strain H37Rv was used as well as a streptomycin-resistant strain, and a freshly isolated strain from human sputum. The animals usually remained well for fourteen days, then they became ruffled, emaciated and lethargic. Post-mortem examination of the lungs showed two main types of lesions: in one there were large yellow grey nodules, greasy on section, and the total bulk of the lungs was increased up to four times normal size; in the other, the lungs were elastic and less enlarged, but showed myriads of small greyish lesions. Microscopically there appeared a larger type of lesion with necrotic, exudative reaction, mononuclear cells predominating, and a lesser aggregation of neutrophil cells. No giant cells were formed nor were there cavities. This picture was usually found in animals which died very rapidly with lungs of large nodular appearance. In the second group, richly cellular proliferative changes occurred, and cells were almost entirely mononuclear; this pattern was usually associated with small lungs and a longer survival time. Small lesions developed in other organs were also described in detail. The authors believed that in their large number of animals they could recognize the pattern of the disease produced by intravenous inoculation sufficiently well to study the results of experimental chemotherapy of the disease with reasonable expectation of producing reliable results. Their third paper reports the results of using twenty different compounds, all of which had displayed some antibiotic effect in the test tube, on the growth of *Mycobacterium tuberculosis*. Control untreated mice were also used and streptomycin-treated animals as a "positive control" of the therapeutic effects of the drugs used. The experiment was continued for twenty-eight days; then the animals were killed and the histological assay of tissue damage was carried out. Streptomycin and β -aminosalicylic acid were the only drugs of any benefit. The authors express the opinion that in animal assay of antibiotic drugs in the treatment of experimental tuberculosis, the three points of survival time, weight loss, and degree of histopathological disease should be reliable indications of usefulness.

Proteolytic Enzyme in Human Plasma.

OSCAR D. RATNOFF (*The Journal of Experimental Medicine*, March, 1948) began his studies on proteolytic enzyme in human plasma by determining the probable identity of the enzymes activated by chloroform and by filtrates of cultures of B haemolytic streptococci. A new technique employing nephelometric estimation of protein concentration in enzyme-substrate mixtures was used. It was shown that the enzyme precursor was present in the euglobulin fraction in either case, and precipitated at pH 5.2. The author concluded that the plasma proteolytic enzyme activated by chloroform was identical with that activated by streptococcal fibrinolysin. He then studied some factors influencing these enzymes. He found that with chloroform, the activation proceeded slowly and that the action was to remove some inhibiting substance, while streptococcal fibrinolysin acted rapidly, and if heated serum was being used, it acted as a catalyst. Digestion of casein

by the enzyme was in direct proportion to the concentration of enzyme. The chloroform activated enzyme was more stable than the fibrinolysin-activated enzyme.

Non-Haemolytic Streptococci from Subacute Bacterial Endocarditis.

S. STANLEY SCHNEIERSON (*Journal of Bacteriology*, March, 1948) has studied the serological and biological characteristics and penicillin resistance of non-haemolytic streptococci isolated from subacute bacterial endocarditis. The existence of the strain known as "streptococcus s.b.e." was confirmed, nine examples occurring amongst the 34 tested. Two strains of enterococcus were encountered which would grow at 45° C., and in the presence of 6% strength of sodium chloride, and two strains of *Streptococcus salivarius*. The rest of the organisms studied could not be classified. The resistance of the s.b.e. strain was found to be slightly higher than the average in the group, but none were very resistant except the two strains of enterococci which were able to withstand large amounts; the majority of the others were sensitive to less than five units per millilitre *in vitro*.

HYGIENE.

Nuclear Energy.

ANDREW H. DOWDY (*American Journal of Public Health and The Nation's Health*, October, 1947) reviews the possible dangers associated with the production of nuclear energy. He points out that the related hazards were circumvented during wartime and that it should be possible to find safe methods of production and utilization in peacetime. He discusses the great commercial and scientific benefits to be obtained from nuclear energy and its products and states that the programme for the national distribution of radioactive isotopes is well under way.

Preventive Medicine in the Post-War Army.

E. J. YOUNG (*Canadian Journal of Public Health*, March, 1948) discusses the place of preventive medicine in the post-war Canadian army, in which provision has been made for full-time health officers who are required to have a diploma of public health. The objectives of service health officers under present conditions are: (i) the protection of troops against disease and industrial hazards, including immunization and the control of communicable diseases, a programme of venereal disease control, study and advice to the proper authorities on such matters as the clothing of the soldier, his nutrition, his living quarters *et cetera*, a programme of industrial medicine where required, as in service workshops, and the usual problems of environmental sanitation—water supply, sewage disposal, pest control *et cetera*; (ii) the collection and preparation of health statistics; (iii) liaison with civil health authorities and with the preventive medicine divisions of other fighting forces; (iv) health teaching of all ranks and service dependants; (v) a preventive medicine programme for service dependants; (vi) a study of the preventive medicine experience of the Canadian army in

the recent war with the objective of making available to military and civilian medicine any data which may be of value. Objectives have also been framed covering the expansion of the preventive medicine organization and a programme of immunization and other preventive measures in the event of a national emergency. Details are given of the personnel and organization provided in the active and reserve forces of the post-war army.

Boils and Infected Hands.

G. P. B. WHITWELL AND I. SUTHERLAND (*British Journal of Industrial Medicine*, April, 1948) report an investigation into the epidemiology of boils and infected hands in a factory population. Records were available for both types of sepsis in one factory over the period April, 1943, to March, 1947. In two other factories, remote from the first and from each other, data of septic hands only were obtained for the year between April, 1946, and March, 1947. In that year the average population of the three factories combined was over 8000. During the period of four years studied in the one factory the incidence of both boils and septic hands increased greatly. For boils the incidence in the final year was double that in the first year. The increase was greater in women than in men. There was no evidence that in this epidemic the septic hands were related to demobilization or that they were associated with tonsillitis or scabies. In about 25% of a random group of cases of septic hand there seems to have been a persistent carrier state as indicated by recurrent lesions. The authors present evidence of a seasonal incidence pattern common to different years, different areas and both types of sepsis. The peak incidence is in the fourth quarter (October or November) and the minimum in the first quarter.

Poisoning by Methyl Mercury Compounds.

AXEL AHELMARK (*British Journal of Industrial Medicine*, July, 1948) reports five cases of methyl mercury poisoning which occurred at a factory for the manufacture of such compounds, in a seed-dressing plant and at a sawmill. The cases were strikingly like seven others previously described in the literature. He describes the special measures, both technical and medical, which were taken to protect the staff from poisoning when exposed to these compounds and emphasizes the need for special attention to be paid to repeated environmental and medical examinations including both blood and urine tests for mercury frequently repeated during the period of exposure.

Epidemiology of Poliomyelitis.

F. B. GORDON, F. M. SCHABEL, A. E. CASEY AND W. I. FISHBEN (*The Journal of Infectious Diseases*, May-June, 1948) have made a laboratory study of the epidemiology of poliomyelitis during an epidemic. Contacts and persons under twenty-five years dwelling in the same block as a patient with a verified paralytic condition for the period of three days before and three days after the prodromal period were studied. A trained nurse made house visits and obtained data and fecal specimens which were put into sterile 50% glycerin-saline solution and frozen. Up to eight samples were obtained from each person, and these were pooled and

carefully prepared for intracerebral inoculation into pairs of monkeys. In some instances intraperitoneal and intranasal inoculation was also performed. Out of a total of 76 individuals tested, virus was found in 23; the incidence was much higher in the household contacts than in the outside contacts. A small series of controls from areas where no known case of poliomyelitis had occurred did not produce virus from any specimen of faeces. The suggestion that only one of every ten infections with poliomyelitis virus is recognizable as a case of the disease is borne out by this investigation. Of the 29 persons whose stools contained virus in this series only three had clinically recognizable infections.

Pneumonic Plague in Mukden.

T. H. TIEH, E. LANDAUER, F. MIYAGAWA, G. KOBAYASHI AND G. OKAYASU (*The Journal of Infectious Diseases*, January-February, 1948) have reported primary pneumonic plague in Mukden in 1946, 39 cases occurring with three recoveries. Russian armies were evacuating the city, where there had been no plague since 1921. The clinical course of the disease resembled pneumonia; buboes were not present, and so diagnosis in the early cases was not made. However, contact cases rapidly developed and the epidemic nature of spread was recognized; a search was made for the organism which was identified in 23 cases from sputum. The incubation period was three to five days, and the duration was short; in the majority of fatal cases the patients died on the third day. Towards the end of the epidemic, five patients were treated with sulphadiazine; two were treated relatively late—on the second and third days—and both died. One patient had prophylactic doses during the incubation period and after symptoms began; a total of 60 grammes was given. Another patient recovered after 66 grammes, while a third patient who recovered had 128 grammes. A search for carriers revealed four persons amongst 42 contacts who had virulent *Pasteurella pestis* in the throat. At least one of these is thought to have been a true healthy carrier.

Sensitivity of Meningococci to Sulphadiazine.

EMANUEL B. SCHOENBACH AND JOHN J. PHAIR (*The American Journal of Hygiene*, March, 1948) tested the sensitivity of meningococci to sulphadiazine. They used 430 strains selected from infected patients and a small number of carriers amongst army personnel, in 1942-1943. The medium used was Mueller and Hinton's starch-casein hydrolysate agar; four plates were inoculated, three containing sulphadiazine in concentrations of 0.5 milligramme, 0.05 milligramme and 0.005 milligramme per 100 millilitres. Only 1.9% of the strains grew in the presence of 0.5 milligramme per centum; 59% were inhibited by 0.05 milligramme per centum, and 10.2% were inhibited by 0.005 milligramme per centum. The authors discuss the application of these test tube levels to prophylaxis and treatment, and suggest that, while the meningococcus is exceedingly sensitive to the action of the sulphonamides, there is a possibility that drug-resistant strains may be bred in a population in which mass chemoprophylaxis is attempted.

British Medical Association News.

NOTICE.

THE General Secretary of the Federal Council of the British Medical Association in Australia has announced that the following medical practitioner has been released from full-time duty with His Majesty's Forces and has resumed civil practice as from the date mentioned:

Dr. John Loewenthal, "Labrador", 217, Macquarie Street, Sydney (September, 1948).

Medical Societies.

SYDNEY UNIVERSITY MEDICAL SOCIETY.

Annual Oration.

THE annual oration for 1948 of the Sydney University Medical Society will be delivered by S. A. Smith, M.B., Ch.M., President of the Royal Australasian College of Physicians, in the Great Hall of the University of Sydney on Thursday, October 28, 1948, at 8 p.m. The subject will be "Therapeutics Past and Present". All who are interested, especially graduates, are invited to be present. Supper will be served in the Union after the oration.

Post-Graduate Work.

THE POST-GRADUATE COMMITTEE IN MEDICINE IN THE UNIVERSITY OF SYDNEY.

Film Evening.

THE Post-Graduate Committee in Medicine in the University of Sydney announces that the following films will be shown at the Stawell Memorial Hall of the Royal Australasian College of Physicians, 145, Macquarie Street, Sydney, on Friday, October 29, 1948, at 8 p.m.: "Surgery in Facial Cancer", "Penicillin in Medicine and Surgery", "Animated Hematology". All members of the profession are invited to attend, and further inquiries should be made by communicating with the Secretary of the Post-Graduate Committee in Medicine, 131, Macquarie Street, Sydney. Telephone: B 6980-BW 7483.

Special Film Evening.

A special film evening has been arranged for post-graduates attending the Part II course for the Diploma in Psychological Medicine on Monday, October 25, 1948, at 8 p.m., in the Stawell Hall, 145, Macquarie Street, Sydney. The following films will be shown: "An Introduction to Clinical Neurology, Parts I-IV"; "Epidemic Encephalitis"; "Progressive Hepato-Lenticular Degeneration"; "Encephalographic Studies in Extrapyramidal Diseases"; "Chronic Lethargic Encephalitis"; "Chronic Encephalitis Parkinsonism"; "Friedreich's Hereditary Ataxia and Little's Disease"; "Neuro-ophthalmological Conditions"; "Feelings of Rejection". All members of the Section of Neurology, Psychiatry and Neurosurgery and interested medical practitioners are invited to be present.

Week-End Course at Newcastle.

A week-end course will be held in conjunction with the Central Northern Medical Association on Saturday and Sunday, October 30 and 31, 1948, in the Nurses' Lecture Room of the Newcastle Hospital. The programme is as follows.

Saturday, October 30: 2 p.m., registration; 2.30 p.m., "Intestinal Obstruction", Dr. Norman Wyndham; 3.45 p.m., "Recent Advances in Medicine", Dr. K. B. Noad.

Sunday, October 31: 10 a.m., "Recent Advances in Obstetrical and Gynaecological Pathology", Dr. Mary Heseltine; 11.30 a.m., "Common Diseases of the Nervous System in Practice", Dr. K. B. Noad; 2 p.m., "The Cure of Difficult Herniae", Dr. Norman Wyndham; 3 p.m., "Laboratory Investigation in Gynaecology", Dr. Mary Heseltine.

Fee for attendance at the course will be £2 2s. Those wishing to attend are requested to notify Dr. E. J. Egan, Honorary Secretary, Central Northern Medical Association, 69, Hunter Street, Newcastle, as soon as possible.

Course for Primary F.R.C.S. Examination.

A course of lectures suitable for candidates sitting for the primary F.R.C.S. examination on February 3, 1949, will be held in conjunction with the New South Wales State Committee of the Royal Australasian College of Surgeons beginning Monday, November 29, 1948, and concluding on January 28, 1949. Lectures in anatomy will be held each afternoon at 2.30 p.m., and a series of lectures in applied physiology and the principles of pathology will be given at 4.30 p.m. A good general knowledge of the subjects will be assumed by the lecturers and a detailed programme of the course will shortly be made available. Fee for attendance will be twenty guineas, payable before enrolment. Those wishing to attend are asked to communicate with the Course Secretary, the Post-Graduate Committee in Medicine, 131, Macquarie Street, Sydney. Telephones: BW 7483-B 6980.

Correspondence.

WORKERS' COMPENSATION FEES.

SIR: We have for a long time accepted Schedule "E" as a just and reasonable schedule of fees.

I wish to point out, however, what appears to be an aggravating omission, a frequent cause of querulous correspondence between insurance companies and general practitioners. I refer to the absence of a specific adequate fee for the performance of minor operations.

The usual procedure after, say, suturing a laceration, where healing by first intention is reasonably expected, is to apply a sealed dressing and dismiss the whole business for six or seven days, when the sutures are removed and the worker signed off.

The fee allowed in such a case, where treatment has been wholly at the surgery, is fifteen shillings, plus one shilling for materials used (a leading Sydney insurance company states that "sixpence per visit for dressings is the maximum amount allowable")—a total, therefore, of sixteen shillings, which everyone will agree is ridiculous.

It would seem superfluous to have to point out that a fee of seven shillings and sixpence plus sixpence is poor return for valuable time, a certain amount of skill, as well as the use of materials such as "Dettol", "Metaphen", "Novocain", sutures, needles, perhaps penicillin-sulphanilamide powder, with gauze, cotton-wool and bandage.

To bring the worker back for unnecessary inspections at seven shillings and sixpence a time in an effort to compensate oneself for this parsimony does savour somewhat of roguery.

Might I humbly suggest that some appropriate amendment to Schedule "E" is indicated?

St. Marys,
New South Wales,
September 8, 1948.

Yours, etc.,
B. C. EGLITZKY.

GANGRENE OF THE LEG FOLLOWING HIGH LIGATION OF THE GREAT SAPHEOUS VEIN.

SIR: It would seem pertinent, in view of the case report by Dr. J. S. T. T. Hill in your issue of August 28, 1948, to delay no longer a brief report of a similar case which I intended to submit to you later this year.

The patient, a married woman, aged thirty, in previous good health, submitted to a left Trendelenburg operation for moderate varicosities along the course of the internal saphenous vein. The operation was carried out on March 8 of this year under local analgesia. The vein was exposed and all demonstrable tributaries tied around the saphenofemoral junction.

The saphenous vein was ligated, and a fine rubber catheter was inserted distal to the ligature, and passed down the vein for about ten inches. A ligature was placed around the vein just distal to the point at which the catheter entered the vein, and "Ethamolin" was injected through the catheter. After injecting approximately four cubic centimetres the patient complained of severe pain in the popliteal fossa, and spreading around the entire knee joint. The injection was

suspended for about a minute, by which time the pain had disappeared, and a further three cubic centimetres were injected, which again provoked a similar though much milder discomfort.

Because of this, the operation was terminated by removing the catheter, tying the distal ligature, and excising a small section of the vein between the ligatures. The skin wound was closed and a dressing applied. On inspection, the anterior skin of the leg and dorsum of the foot presented a mottled, bluish appearance, and the posterior skin looked normal, as did the upper anterior surface of the thigh. The femoral artery could be felt pulsating weakly.

During the next few days it became apparent that a definite section of the arterial tree of the anterior thigh and leg was occluded. A slow and definite gangrenous process developed, involving a fusiform section of the anterior thigh and leg extending from five inches above the patella to within two inches of the ankle joint and approximately five inches wide at its centre, with the exception of a small bridge of viable tissue an inch and a half wide over the tibial tuberosity. Dorsiflexion of the foot at the ankle joint was absent for the first post-operative fortnight. From then on this movement faintly returned for about three weeks, only to disappear again as the muscles in the anterior compartment of the leg slowly but completely sloughed away.

Her present plight is as follows. There is a large area of healthy granulation tissue over the lower three inches of the quadriceps muscle, and a healthy granulation tissue growing up over the anterior surface of the interosseous membrane between the tibia and fibula, replacing the anterior leg muscles.

The skin over the patella and for half an inch beyond the periphery of the patella still exhibits a hard, dry gangrene. An area half an inch wide by eight inches long of the antero-lateral surface of the tibia is exposed amidst the granulation tissue.

The subsequent plan of campaign, which will involve extensive plastic surgery, is not relevant to this case report, which is to determine the rationale of the disaster. My own opinion, which is shared by colleagues whom I have consulted, postulates a preexisting arterio-venous connexion of some magnitude, probably centred about the popliteal fossa. The vitality of the foot, and all the leg tissues posterior to the interosseous membrane, as well as those over the antero-medial aspect of the tibia, and also the vast majority of the entire thigh, does not, I think, support the diagnosis of complete occlusion of the main arterial tree at any point in the limb.

I have been unable to trace any similar case history connected with this operation.

Yours, etc.,
R. P. BOOTH.

37, Brisbane Street,
Launceston,
Tasmania.
September 3, 1948.

SIR: Dr. J. S. T. T. Hill's report of a case of gangrene following high ligation of the saphenous vein (THE MEDICAL JOURNAL OF AUSTRALIA, August 28, 1948, page 238) prompts me to report a similar case.

Some years ago I ligated the right saphenous vein of a woman, aged twenty-five years, under local anaesthesia. Immediately after ligation the distal end of the vein was injected with six cubic centimetres of "Ethamolin". This caused immediate and intense pain in the knee and ankle, so much so that I suspected that I had either injected the wrong solution or the wrong vessel. The former condition was excluded and further dissection established the fact that the internal saphenous vein, and the internal saphenous vein only, had been ligated and injected. On uncovering the limb after completion of the operation there was a severe bluish-white reaction in the distribution of the internal saphenous vein as far as the knee, the toes were pale, and there was no pulsation in the posterior tibial or *dorsalis pedis* arteries. Next day there was oedema and tenderness of the thigh and leg, but not of the ankle, and there was some return of circulation to the limb. On the fifth day the thigh and leg were less oedematous and tender except for the anterior tibial compartment, which was tense and tender, and the patient was practically unable to dorsiflex her toes. The fascia over this compartment was incised to relieve tension and the muscles were found to be greyish in colour. The leg was kept elevated and the foot dorsiflexed. Pinkish necrotic muscle products were discharged from the wounds in the leg. In due course these healed and there was a fibrosis of the anterior tibial compartment which prevented a foot drop. The patient now has a foot which cannot be plantar flexed and has extremely little disability.

At the time of the operation the possibility of arterial spasm was not known and the spasm appeared to be a reflex phenomenon precipitated by the injection rather than by the ligation. Like Dr. Hill I was also very much indebted to my colleagues for their moral support. About a week after operation Dr. J. P. Ainslie informed me that he had read of a similar case and that if the condition could be recognized it should be treated by immediate spinal anaesthesia to abolish the arterial spasm. In this case the use of local anaesthesia did not protect the patient from arterial spasm, as suggested by Dr. Hill, but the use of local anaesthesia would allow early recognition and prompt treatment of this accident. For this reason, if for no other, I consider that general anaesthesia is contraindicated in this particular operation.

Yours, etc.,
JAMES H. YOUNG.

131, Scarborough Beach Road,
Mount Hawthorn,
Western Australia.
September 3, 1948.

MEDICAL HISTORY OF THE WAR OF 1939-1945.

SIR: With reference to the Medical History of the war, I should like to amplify the paragraph published in THE MEDICAL JOURNAL OF AUSTRALIA on October 2, 1948.

The value of personal meetings and discussions between representatives of all the Medical War Histories of Britain and the Dominions, and of the United States of America, has been very great. It is confidently hoped that the histories will not only be more accurate, but will be more speedily completed through this help and stimulus.

The medical historians are finding the same difficulties, one of which is the obtaining of assistance from ex-service medical officers. There are several reasons for this. Access to documents is often necessary, and this is difficult, secretarial assistance is very scarce, the men are now fully occupied in practice and teaching, and the war tends to become more and more distant to them. My own experience has frequently been that either no response is obtained to requests for help, or that promises, for one reason and another, are not carried out. Consequently I have almost ceased to seek material by request, but there must be numbers of medical officers who still have interesting material who could make this available. I am planning publication of a clinical volume before the operational volumes, but should welcome the loan of any material relevant to any medical subject, even if in the briefest skeleton outline. Copies of reports made on professional or operational matters, collected accounts of medical and surgical conditions, or diaries would be welcome. Much material of this kind is already appended to war diaries, but some of it has apparently been lost, and the labour of disinterring it single-handed is considerable and tends to delay the work unduly. Photographs or drawings would also be welcome; numbers of medical officers have made these available, and to them I am grateful. I should be still more grateful to any ex-service medical officers who could respond to this appeal.

Yours, etc.,
ALLAN S. WALKER,
Medical Historian.

Acton,
Canberra,
Australian Capital Territory.
October 4, 1948.

PRESS STATEMENTS BY MEDICAL PRACTITIONERS.

SIR: May I draw attention to a most objectionable procedure which is becoming commonplace and which, although anonymity is maintained, appears to me to be most unethical and is certainly open to grave objection.

Here in Melbourne the standard of journalism is steadily being lowered in a few publications whose policy has become the cult of sensationalism. Unfortunately some medical men, often with little or no first-hand knowledge of the particular subject being featured, lend themselves to bolstering up statements, which indeed may have a substratum of truth, by making observations which only serve to bring them into the contempt of those official practitioners who have the handling of many difficult situations.

I should not have taken the trouble to write of what my colleagues have accepted as an inescapable part of their

work, were it not that in a recent attack upon medical treatment in our mental hospitals, it was stated: "Another Collins Street specialist in mental disorders said shock treatment was grossly overdone at Royal Park" *et cetera*. I instance this as only one of several statements lately made which disparage the ability, integrity or judgement of my staff and which to say the least of them are of a grossly insulting nature.

I hesitate to express my opinion of these anonymous traducers of honourable men, in whom I have the utmost confidence, but I do think the time has come when matters of this nature should attract the attention of the Council.

Yours, etc.,

J. CATARINICH,
Director of Mental Hygiene.

18, Bradford Avenue,
Kew,
Victoria.
September 21, 1948.

THE ROYAL PRINCE ALFRED HOSPITAL CANCER OF THE UTERUS FOLLOW-UP.

SIR: It was of great interest to read the satisfactory results shown by the follow-up of cases of cancer of the uterus from the Royal Prince Alfred Hospital in your issue of September 18, 1948. In the present state of our knowledge the figures are a suitable subject for congratulations to the staff engaged in the work.

Probably in an endeavour to save space, a statement is made which, in its present form, could be interpreted in a sense which is directly contrary to the facts: "As radium or deep X-ray therapy has no effect on squamous or adenocarcinomatous deposits in lymph glands, the reason for our superior results from added surgery is obvious."

Presumably Dr. Schlink and his associates are referring to the fact that in cases of carcinoma of the cervix, the distribution of the regional lymph glands in the pelvis which should be attacked in potentially curable cases, presents one of the most difficult problems possible to the radiotherapist. The fact that they lie in different planes, at a considerable depth from the surface, and in close relationship with some radiosensitive structures, for example, the small bowel, has meant in the past that with orthodox X-ray therapy equipment, it is arguable whether carcinolytic dosage levels could be reached, in association with the local γ radiation given *per vaginam*. Much good work has been done on this problem, and I would refer the authors to the publications of Miss Todd.

On the other hand, that secondary deposits of squamous or adenocarcinoma in lymph glands can be destroyed by appropriate dosage of radiation in other situations is, of course, well known to any experienced radiotherapist. In our own relatively small clinic, which has an adequate follow-up system, we have records of cases both in the axilla and localized regions of the neck successfully treated by radiation.

I cannot close without suggesting to the authors that many years have passed and much knowledge has accumulated since it was sufficient to say: "The heavier screenage of the vault tubes was decided upon to prevent burning of the vaginal mucosa."

Yours, etc.,

W. P. HOLMAN (Radiologist).

General Hospital,
Launceston,
September 29, 1948.

Naval, Military and Air Force.

APPOINTMENTS.

THE undermentioned appointments, changes *et cetera* have been promulgated in the *Commonwealth of Australia Gazette*, Number 139, of September 23, 1948.

ROYAL AUSTRALIAN AIR FORCE.

Permanent Air Force: Medical Branch.

Flying Officer (Temporary Group Captain) R. B. Davis (251167) is transferred from the Citizen Air Force and is appointed to a short-service commission, 23rd September, 1948, and is promoted to the rank of Group Captain, 23rd September, 1948.

Flying Officer (Temporary Wing Commander) H. J. Melville (1171) is appointed to a short-service commission, 23rd September, 1948, and is promoted to the rank of Wing Commander, 23rd September, 1948.

Flying Officer (Temporary Wing Commander) G. C. V. Thompson (252836) is transferred from the Citizen Air Force, and is appointed to a short-service commission, 23rd September, 1948, and is promoted to the rank of Wing Commander, 23rd September, 1948.

Flying Officer (Temporary Wing Commander) D. McK. McNab (252720) is transferred from the Citizen Air Force and is appointed to a short-service commission, 23rd September, 1948, is promoted to the rank of Squadron Leader, 23rd September, 1948, and retains the temporary rank of Wing Commander, 23rd September, 1948.

The following Flying Officers (Temporary Squadron Leaders) are transferred from the Citizen Air Force and are appointed to short-service commissions, 23rd September, 1948, are promoted to the rank of Flight Lieutenant, 23rd September, 1948, and retain the temporary rank of Squadron Leader, 23rd September, 1948: R. G. Skinner (267526), J. B. Craig (297223), G. A. Leyland (287460), M. C. Clarke (276695).

Flying Officer (Temporary Squadron Leader, Acting Wing Commander) L. R. Trudinger (257718) is transferred from the Citizen Air Force and is appointed to a short-service commission, 23rd September, 1948, is promoted to the rank of Flight Lieutenant, 23rd September, 1948, and retains the temporary rank of Squadron Leader and acting rank of Wing Commander, 23rd September, 1948.

Obituary.

PIERO FRANCIS FIASCHI.

THE following appreciation of the late Dr. Piero Francis Fiaschi has been received from Dr. Zelman Freeman.

The passing of Piero Fiaschi removes from our midst one of the most colourful medical characters of our day. Although there are many who knew him more intimately than I and are better fitted to record his life's doings, I would like to mention a few typical anecdotes that illustrate the man as he was.

My first acquaintance with Piero was when, as house surgeon to Dr. Bullock at Sydney Hospital, I had occasion to ring Phillip Street and ask details of a patient whom Piero had sent in. A hearty booming voice greeted me, conjuring up the vision of a robust male in his prime; the voice ended by extending a warm invitation to a glass of wine that evening at his home. When I arrived I was greeted at the front door by an angular scarecrow of a man in his shirt sleeves, with braces hanging down, and sporting a bowler hat tilted on the back of his head. "Come in", he boomed, as I introduced myself, and in I went. Piero braced a bottle of his best white Shiraz and we drank. My host told me that a bottle of good wine a day was the secret of long life. He then showed me over his rooms and what I saw amazed me. There were filing systems so accurate that with a flick of a finger he could pin-point any one of his patients, but what was more interesting was his apparatus that was made of burnished copper, from slop bucket to a distilling plant for making distilled water, every piece of metal hand-fashioned by expert craftsmen. What love he lavished on his equipment; every piece was shielded by a dust cover. The metal gleamed repayment for the hours spent in polishing it. It happened that the patient Piero had sent in was his faithful manservant who showed signs of a cancer of the stomach. He was to be operated on by Dr. Bullock as soon as the pre-operative preparation was complete. We arranged to meet in the ward at 10 a.m. the following day to do the gastric lavage together.

When I arrived Piero was in the ward bathroom with the lavage almost completed, and each day he managed to get there a little earlier than I, cheerfully taking on a junior's task as if it gave him pleasure to be of assistance. Came the operation day and Piero was abroad early, for when I did rounds at 9 a.m. I was met by a rather distraught sister. She greeted me with: "Whatever is going to happen? Dr. Fiaschi has left a bottle of wine for the gastrectomy patient and has given strict orders for him to have several glasses before the operation. Heaven help us if Mr. Bullock opens that stomach and smells wine!" I rather agreed that this was a scene too terrible to contemplate. I never found out who got the wine.

After the operation Piero came out with a giant-sized handkerchief and knotted the corners; this he placed on the patient's head. "To protect him from draughts, doctor", was his reason. This phobia of draughts was well known. His ritual in the out-patient department was to climb onto 'perilous ledges in order to shut the uppermost windows and then close all doors and sit in his top-coat. This brings me to my final anecdote. Piero had occasion to examine a rectum with a proctoscope and the out-patient sister was holding the light. Suddenly Piero blew up; he could not see a thing and he said so very plainly. "Why don't you take off your hat, then you'd see more", was the sister's curt reply.

WILLIAM FRANCIS ORR.

DR. WILLIAM FRANCIS ORR was the son of Andrew Orr, of Ballarat, a journalist. Educated at Ballarat College, of which he was dux in 1885, William Francis Orr did his medical course at the University of Melbourne and graduated bachelor of medicine in 1894. He was resident medical officer at the Women's Hospital and also at the Eye and Ear Hospital, Melbourne, and obtained the degree of bachelor of surgery in 1901. He also became a doctor of medicine of the University of Melbourne subsequently. He commenced in private practice as assistant to Sir James Barrett and later was his partner until they separated in 1919 after war service. From 1913 to 1927 Dr. Orr was active on the honorary staff of the Eye and Ear Hospital, serving in the dual capacity as an ophthalmologist and ear, nose and throat specialist. He was also a member of the committee of management of the Eye and Ear Hospital and became a Foundation Fellow when the Royal Australasian College of Surgeons was formed.

Dr. Orr's published works include a clinical contribution to the study of glaucoma (1911) and he was associated with Sir Charles Martin and Sir James Barrett in the investigation on the accommodation of the pupils and the retina of monkeys. He used to acknowledge his indebtedness as a student under Dr. Gray, from whom he learned "what an eye will stand". He was a contemporary and friend of Dr. Edward Ryan, Dr. A. L. Kenny, Dr. Percy Webster, Dr. Rennie, Dr. Hamilton Russell and Sir Henry Maudsley, all of whom have left their stamp on medical and surgical practice in Victoria. Dr. J. S. Buchanan was one of his school and university fellow students.

Dr. Orr had, as hobbies, golf with the Royal Melbourne Golf Club and his music. He was a member of the Lady Northcote Trust Fund during the time when Professor Marshall Hall was conductor. He was also a great reader and his reading covered a wide range of subjects.

We extend our sympathy to his son, Dr. R. Graeme Orr, and his relatives.

Dr. Archie S. Anderson writes: For nine years I was assistant to the late Dr. W. F. Orr. They were years full of hard work and the happiness it brings. He was a tremendous worker, and during his time at the Victorian Eye and Ear Hospital Friday was always reckoned by his resident medical officer as a "breakfastless day", not as a matter of conscience, but simply because his chief was liable to arrive at any moment after 8.30 a.m. His day always began with a round of his patients at "Lumeah" and rarely indeed was I there before him. There was usually some operating to be done, and from then on the day was a whirl of activity, for not only was he a prodigious worker, but a very fast one. His speed, both physical and mental, was phenomenal. To walk with him from the hospital to his rooms was a very brisk exercise and his quickness of mind made it possible for him to sum up the salient points of a case with unusual rapidity. Yet, for all his quickness, he was rarely ruffled and his courtesy to patients, particularly his public hospital ones, was unflinching. I remember his becoming terse with a patient only once, and even then his rebuke was dignified: "Madam, please be quiet. I'm trying to think." He was very alert for any new developments in his specialty, but, though ready to try them, he was never carried away by mere newness. The new had to prove itself superior to the old before he adopted it as a routine procedure. When first I went to him corneo-scleral trephining for glaucoma had recently come into fashion. I saw many of his patients on whom a trephine had been performed in one eye and an "old fashioned" iridectomy in the other. With impish humour he would draw attention to the fact that the result was much the same in each eye. He was intolerant of one thing, humbug, and one of the qualities I remember most in him was his moral integrity and scientific honesty. His profession was his life and, apart

from music of which he was passionately fond, he took little relaxation. But this is not the full picture. There was in him a kindness, a generosity and a loveliness that drew forth the loyalty of his staff in a manner that few could emulate and none surpass. Never shall I forget his generous and kindly help to me in my early days of practice, and for me, as for others, he will always be "The Chief", kindly principal, helpful colleague and loyal friend.

FRANCIS AUDUBON GRAY.

We regret to announce the death of Dr. Francis Audubon Gray, which occurred on September 28, 1948, at Melbourne.

HENRY PATRICK BLANEY.

We regret to announce the death of Dr. Henry Patrick Blaney, which occurred on October 3, 1948, at Maryborough, Queensland.

University Intelligence.

THE UNIVERSITY OF MELBOURNE.

THE following information is taken from the *University Gazette* of the University of Melbourne for September 22, 1948.

Dr. H. W. Garlick and Dr. K. N. Morris have been appointed clinical supervisors at the Royal Melbourne and Alfred Hospitals respectively.

Mr. J. S. Heuston has won the Robert Andrew Stirling Prize in Clinical Surgery awarded annually to a student at the Royal Melbourne Hospital.

Professor Hugh Ward has been appointed to the Interim Council of the Australian National University.

Australian Medical Board Proceedings.

QUEENSLAND.

THE undermentioned have been registered, pursuant to the provisions of *The Medical Acts, 1939 to 1946*, of Queensland, as duly qualified medical practitioners.

Thomson, George Macdonald, M.B., B.S., 1928 (Univ. Sydney), M.R.C.P., 1932 (London), F.R.C.S., 1933 (Edinburgh), F.R.C.S., 1938 (England), c.o. Dr. D. Fowles, Bundaberg.

Sunderman, Jack, M.B., B.S., 1946 (Univ. Melbourne), Hospitals Board, Cairns.

Hinckley, Beryl May, M.B., Ch.B., 1943 (Univ. Bristol), Hockings Street, Clayfield, Brisbane.

The following additional qualifications have been registered:

Sampson, Victor Edward, c.o. Dr. G. A. Sampson, Strangman Terrace, Coorparoo, Brisbane, M.R.C.P. (London), 1947.

Gillogley, Jack Francis, Ballow Chambers, Wickham Terrace, Brisbane, Diploma in Radiology (Univ. Sydney), 1947.

Suggit, Stephen Creighton, Brisbane Clinic, Wickham Terrace, Brisbane, F.R.A.C.S., 1948.

NEW SOUTH WALES.

THE undermentioned have been registered, pursuant to the provisions of the *Medical Practitioners Act, 1938-1939*, of New South Wales, as duly qualified medical practitioners:

Bradford, Anthony Boucher, M.R.C.S. (England), L.R.C.P. (London), M.D. (Durham), 1902, Hamilton Avenue, Bowral.

Carroll, William, L., L.M., R.C.P., L., L.M., R.C.S., 1907 (Ireland), 40, Gordon Street, Centennial Park.

Fitzpatrick, Michael, L., L.M., R.C.P., L., L.M., R.C.S., 1943 (Ireland), C.P.H., 1947 (National Univ. Dublin), 247, Ernest Street, North Sydney.
 Solomon, Ivor, M.B., B.S., 1936 (Univ. Bombay), 2, George Street, Dover Heights.
 Thompson, Leslie Joseph, M.B., Ch.B., 1912 (Univ. New Zealand), F.R.C.S., 1914 (England), c.o. Box 1727, G.P.O., Sydney.

Corrigendum.

DR. DOUGLAS THOMAS (Melbourne) has advised us that the statement "A basic dose of one-half mega-unit of penicillin daily for two weeks might be expected to control the infection in a very high percentage of patients", which appears in the summary of a paper read by him published in the issue of October 2, 1948, at page 389, should read "A basic dose of one-half mega-unit of penicillin daily for four weeks might be expected" *et cetera*. Dr. Thomas adds that the dose for a second (relapse) course is two million units per day for eight weeks. He also points out that of the five patients reported as having died while under treatment four died because of congestive cardiac failure.

Medical Practice.

POLICE OFFENCES (AMENDMENT) ACT.

ADVICE has been received from the Under Secretary to the New South Wales Chief Secretary's Department that the following amendment relating to the making of entries in the register of drugs has been made to the Drug Regulations under the *Police Offences (Amendment) Act, 1908*, as amended:

Regulation 11 is amended by adding the following new paragraph after paragraph (1):

(1A) A person required to keep a register in or to the effect of Schedule 5 to the Regulations shall not make therein any entry which is false or misleading.

Notice.

THE librarian of the University of Queensland Medical School advises that duplicate copies of the following books are held in the library and will be given to anyone interested: Barrett and Deane: "The Australian Army Medical Corps in Egypt", 1919; Billroth: "Surgical Pathology and Therapeutics", 1871; Burghard and Kanavel: "Oxford Surgery", five volumes, 1920; Campbell: "Textbook of Surgical Anatomy", 1908; Castle: "Anæmias and Vitamin Deficiencies", 1939; Choyce: "System of Surgery", Volume I and Volume III, 1914; Collection of Papers of Mayo Clinic, 1905-1913, 1915, 1919-1921; Edinburgh Pathological Club: "An Inquiry into the Medical Curriculum", 1919; Gould: "Illustrated Medical Dictionary", 1902; Hutchison and Rainy: "Clinical Methods", 1899; Jacobson and Steward: "Operations of Surgery", two volumes, 1902; Johnson: "Operative Therapeutics", five volumes, 1915; Keen: "Surgery: Its Principles and Practice", six volumes, 1908; Kocher: "Textbook of Operative Surgery", 1911; Moynihan: "The Pathology of the Living and Other Essays", 1910; "Queen Charlotte's Practice of Obstetrics", 1927; Rose and Carless: "A Manual of Surgery", Fifth Edition, 1902; "Surgical Clinics of Chicago", 1919; Thomson and Miles: "Manual of Surgery", two volumes, Fourth Edition, 1911.

Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Laing, Mary Kathleen, provisional registration, 1948 (Univ. Sydney), Royal North Shore Hospital, Crow's Nest.

Hartnett, Bruce Stevenson, provisional registration, 1948 (Univ. Sydney), Royal North Shore Hospital, Crow's Nest.
 Firkin, Caleb Lawry, M.B., B.S., 1947 (Univ. Sydney), Longworth Avenue, WallSEND, 2N., New South Wales.
 Stephen, Henry Mitchell, M.B., B.S., 1947 (Univ. Sydney), 54, Barcom Street, Merrylands.

Diary for the Month.

OCT. 18.—Victorian Branch, B.M.A.: Finance, House and Library Subcommittee.
 OCT. 19.—New South Wales Branch, B.M.A.: Medical Politics Committee.
 OCT. 20.—Western Australian Branch, B.M.A.: General Meeting.
 OCT. 21.—New South Wales Branch, B.M.A.: Clinical Meeting.
 OCT. 21.—Victorian Branch, B.M.A.: Executive Meeting.
 OCT. 22.—Queensland Branch, B.M.A.: Council Meeting.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Honorary Secretary, 135, Macquarie Street, Sydney): Australian Natives' Association; Ashfield and District United Friendly Societies' Dispensary; Balmain United Friendly Societies' Dispensary; Leichhardt and Petersham United Friendly Societies' Dispensary; Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney; North Sydney Friendly Societies' Dispensary Limited; People's Prudential Assurance Company Limited; Phoenix Mutual Provident Society.

Victorian Branch (Honorary Secretary, Medical Society Hall, East Melbourne): Associated Medical Services Limited; all Institutes or Medical Dispensaries; Australian Prudential Association, Proprietary, Limited; Federal Mutual Medical Benefit Society; Mutual National Provident Club; National Provident Association; Hospital or other appointments outside Victoria.

Queensland Branch (Honorary Secretary, B.M.A. House, 225, Wickham Terrace, Brisbane, B.17): Brisbane Associated Friendly Societies' Medical Institute; Bundaberg Medical Institute; Brisbane City Council (Medical Officer of Health). Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 178, North Terrace, Adelaide): All Lodge appointments in South Australia; all Contract Practice appointments in South Australia.

Western Australian Branch (Honorary Secretary, 205, Saint George's Terrace, Perth): Wiluna Hospital; all Contract Practice appointments in Western Australia. All government appointments with the exception of those of the Department of Public Health.

Editorial Notices.

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